

2nd International Conference on Materials Science, Machinery and Energy Engineering (MSMEE 2017)

Advances in Engineering Research Volume 123

Dalian, China
13-14 May 2017

Part 1 of 3

Editors:

Jianhou Zhou

Ping Zhu

ISBN: 978-1-5108-4230-4

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2017) by Atlantis Press
All rights reserved.
<http://www.atlantis-press.com/php/pub.php?publication=msmee-17>

Printed by Curran Associates, Inc. (2017)

For permission requests, please contact the publisher:

Atlantis Press
Amsterdam / Paris

Email: contact@atlantis-press.com

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

PART 1

| | |
|--|-----|
| PREPARATION OF GRAPHENE NANOPORE BASED ON AFM | 1 |
| <i>Siyuan Wei, Zhongxin Qi, Tongyu Ji</i> | |
| RESEARCH ON PATHOLOGICAL MECHANISM OF DEPRESSION AND ANTIDEPRESSANT DRUG TARGET | 5 |
| <i>Yu Liu, Bin Wu, Ligu Guo, Yongzhi Li</i> | |
| RESEARCH ON APPLICATIONS OF CELL-FREE PROTEIN SYNTHETIC SYSTEM IN THE FIELD OF BIOPHARMACEUTICAL ENGINEERING | 9 |
| <i>Wei Long, Weihua Tang, Chunhui Lv</i> | |
| BIOCHEMICAL PHARMACOLOGY RESEARCH OF RHUBARB IN TRADITIONAL CHINESE MEDICINE | 14 |
| <i>Yanfei Sun</i> | |
| FLUIDIZED BED DEVICE PROCESSING SIMULATION OF INDUSTRIAL SMELTING WASTE WATER FLUORIDE IN EXPERIMENTAL STUDY | 18 |
| <i>Qian Guan, Yang Yang, Luyi Yao, Xingzhen Sui</i> | |
| STUDY ON THE TIME CHARACTERISTIC OF TERAHERTZ FOR RUBBER MATERIAL | 24 |
| <i>Feng Xu, Qingduo Duanmu</i> | |
| SYNTHESIS OF ZINC - BISMUTH COMPLEX OXIDE AND EXPERIMENTAL ANALYSIS OF ITS MAGNETIC AND ELECTRICAL CHARACTERISTICS | 27 |
| <i>Shirui Weng, Xianyi Zhang</i> | |
| RESEARCH ON BIG DATA VOLUME STORAGE STRUCTURE DESIGN AND QUICK QUERY MECHANISM OF ORACLE DATABASE | 33 |
| <i>Dingfa Liu</i> | |
| IGNITION COIL PRIMARY BOBBIN ISSUE ANALYSIS | 39 |
| <i>Yuan Ye</i> | |
| THE POTENTIAL OF REMAINING OIL AND EXPLORATION METHODS OF THE SECOND CLASS RESERVIOR | 43 |
| <i>LiHua Ma</i> | |
| STUDY ON FRACTURING TECHNOLOGY OF POLYMER FLOODING IN THE SECOND CLASS RESERVOIR | 48 |
| <i>Hui Xing</i> | |
| APPLICATION OF THE MULTI-CURVE RECONSTRUCTION TECHNOLOGY IN SEISMIC INVERSION | 53 |
| <i>Yun-zeng Wang</i> | |
| RESEARCH AND APPLICATION OF INFORMATION TECHNOLOGY IN CONSTRUCTION ENTERPRISE | 57 |
| <i>Weidong Liu</i> | |
| RESEARCH ON SEPARATION VARIABLE METHOD IN MATHEMATICAL PHYSICS EQUATION | 62 |
| <i>Xishan Yu</i> | |
| THE LATHE CHUCK WRENCH SAFETY DEVICE DESIGN | 66 |
| <i>Dachuan Chen</i> | |
| ADDING ORDINARY LATHE CHUCK WRENCH SAFETY INTERLOCK DEVICE AND THE NECESSITY OF USING EFFECT | 69 |
| <i>Dachuan Chen</i> | |
| FAGOPYRUM MILL-A REVIEW OF PHYTOCHEMISTRY AND PHARMACOLOGICAL EFFECTS | 72 |
| <i>Jin-Shuang Zhao, Cheng-Hao Yu, Cheng Peng</i> | |
| RESEARCH AND IMPLEMENTATION OF SEARCH ENGINE BASED ON JAVA TECHNOLOGY | 82 |
| <i>Xiaohua Chen, Gang Tian</i> | |
| CONSTRUCTION OF EXPERIMENT TEACHING CENTER OF VIRTUAL SIMULATION OF ECONOMIC MANAGEMENT IN APPLICATION-ORIENTED COLLEGES -----STUDY ON SHAAN XI INSTITUTE OF INTERNATIONAL TRADE & COMMERCE | 86 |
| <i>Ming Feng</i> | |
| APPLICATION OF DATA MINING TECHNOLOGY IN TOURISM INFORMATION RECOMMENDATION | 93 |
| <i>Wanchun Zhu</i> | |
| SIMULATION AND RESEARCH OF AUTOMOBILE INDUCTION MOTOR DRIVE CONTROL SYSTEM BASED ON MATLAB/SIMULINK SOFTWARE | 99 |
| <i>Xiaoqing Zhang</i> | |
| A NOVEL PREDICTIVE CURRENT CONTROL FOR ACTIVE POWER FILTER | 104 |
| <i>Dake Gao, JingRong Yu</i> | |
| RESEARCH ON THE SECURITY BASED ON WEB DATABASE | 115 |
| <i>Hua Ren</i> | |
| RESEARCH ON INTELLIGENT COMMERCIAL DATA MINING MODEL BASED ON MULTI - METHOD FUSION IN HIGH - SPEED OPTICAL FIBER COMMUNICATION NETWORK | 120 |
| <i>Xiaoxuan Sun, Xiaoming Zha</i> | |
| FUSION ANALYSIS OF FIBER BRAGG GRATING SENSOR AND GEOTECHNICAL ENGINEERING | 125 |
| <i>Yao Xu, Ping Hu</i> | |

| | |
|---|-----|
| CLINICAL OBSERVATION ON COMBINED THERAPY OF ATORVASTATIN CALCIUM AND XUEZHUKANG ON LIPID-LOWERING | 129 |
| <i>Min Chen</i> | |
| APPLICATION OF LORA SPREAD SPECTRUM TECHNOLOGY ON INTELLIGENT WATER METER | 133 |
| <i>Wenchang Wu, Weida Sun</i> | |
| THE APPLICATION OF ELECTRONIC INFORMATION TECHNOLOGY IN ELECTRIC POWER AUTOMATION SYSTEM | 137 |
| <i>Ruidong Li</i> | |
| REPAIR EFFECT OF MESENCHYMAL STEM CELLS ON FRACTURE MODEL ANIMALS | 141 |
| <i>Jia Liu, Peng Zhou, Xiaoyun Liu</i> | |
| LINE LOSS CALCULATION FOR DISTRIBUTION NETWORK BASED ON STATES CHARACTERIZATION | 146 |
| <i>Junming Huang</i> | |
| RESEARCH ON ENCODING AND DECODING ALGORITHMS OF LDPC CODES | 152 |
| <i>Yifeng He, Zhemian Duan</i> | |
| RESEARCH ON THE INFORMATION RESOURCES INTEGRATION BASED ON THE BIG DATA PLATFORM | 156 |
| <i>Yin Lei, Jiahong Zhong</i> | |
| RESEARCH ON RELIABILITY SELECTION AND APPLICATION CONTROL OF ELECTRONIC COMPONENTS | 160 |
| <i>Jiahong Zhong, Yin Lei</i> | |
| IMPROVEMENT OF ERP SAND TABLE SIMULATION OPERATION BASED ON NETWORK PLATFORM | 164 |
| <i>Jing Cao, Hanwen Liu, Lin Yi</i> | |
| APPLICATION OF DATA MINING TECHNOLOGY IN SOFTWARE ENGINEERING | 169 |
| <i>Jie Ma</i> | |
| RESEARCH ON APPLICATION OF MOBILE CONTEXT-AWARENESS IN RECOMMENDATION SYSTEM | 173 |
| <i>Jie Ma</i> | |
| THE EVOLUTION OF KEY TECHNOLOGIES OF MOBILE COMMUNICATION SYSTEMS FOR HIGH-SPEED RAILWAY | 177 |
| <i>Pan Feng</i> | |
| RESEARCH ON THE APPLICATIONS OF 3D PRINTING TECHNOLOGY IN THE FIELD OF GENERAL TECHNIQUES | 182 |
| <i>Guan Huang</i> | |
| ON PREPARATIONS AND APPLICATIONS OF NANO-MATERIALS FOR BATTERIES | 186 |
| <i>Dingzhu Yang</i> | |
| STUDIES ON PREPARATION OF MATRINE SOLID DISPERSION SUSTAINED-RELEASE TABLETS | 190 |
| <i>Zao-hui Li, Jiao Wang</i> | |
| IMPROVEMENT OF BRA CLEANING TECHNOLOGY BASED ON MECHANICAL STRUCTURE AND ELECTRONIC CONTROL TECHNOLOGY | 199 |
| <i>Liangcheng Cheng, Yali Ruan, Zongye Chang</i> | |
| THEORY OF STAR PRIVACY PROTECTION | 203 |
| <i>Xiaoxuan Cui</i> | |
| AEROBIC DENITRIFIERS: CHARACTERISTICS AND RECENT RESEARCH | 207 |
| <i>Huiying Li, Wenxiang Wang, Shaobin Huang</i> | |
| RESEARCH ON DESIGN AND IMPLEMENTATION OF DISPLAY SYSTEM OF INTELLIGENT BUS BOARD BASED ON GPRS | 215 |
| <i>Xue Zeng</i> | |
| LIBRARY'S SMART BOOKSHELF AND BOOK POSITIONING SYSTEM BASED ON ULTRA-HIGH FREQUENCY RFID TECHNOLOGY | 219 |
| <i>Xiaoyang Wang, Hui Pan, Ruixiang Ou</i> | |
| RESEARCH ON INTELLIGENT LIBRARY DOCUMENT NAVIGATION SYSTEM BASED ON GIS | 223 |
| <i>Ruixiang Ou, Hui Pan, Yao Huang</i> | |
| DESIGN AND IMPLEMENTATION OF LIBRARY RESOURCE SHARING SYSTEM DATABASE BASED ON GIS | 228 |
| <i>Hui Pan, Ruixiang Ou, Yao Huang</i> | |
| TECHNICAL INDEX ANALYSIS AND STRUCTURE DESIGN RESEARCH OF MODULAR MANIPULATORS | 232 |
| <i>Yu Bu</i> | |
| RESEARCH ON KEY TECHNOLOGY OF COMPUTER SECURITY MONITORING SYSTEM | 236 |
| <i>Hui Jin</i> | |
| RESEARCH ON THE APPLICATION OF COMPUTER NETWORK STORAGE TECHNOLOGY | 240 |
| <i>Hui Jin</i> | |
| STUDY ON PREFERRED METHOD OF OPTIMIZING POLYMER MOLECULAR WEIGHT | 244 |
| <i>Yongying Zeng</i> | |
| THE ERA "INTERNET +" TAXI RESOURCES CONFIGURATION RESEARCH | 248 |
| <i>Xiaocheng Gao, Yingbing Fan, Guoxian Wang, Ye Wang, Xichun Jiang, Yannan Mu</i> | |
| THE DIFFERENTIAL EQUATION RESEARCH ON DESIGN CONTROL OF MOORING SYSTEM | 253 |
| <i>Jinling You, Xiaocheng Gao, Ye Wang, Yingbing Fan, Qi Shen, Yannan Mu</i> | |
| DISCUSSION ON BACKUP AND RECOVERY TECHNOLOGY OF COMPUTER DATABASE | 257 |
| <i>Xiangrong Zhou</i> | |

| | |
|--|-----|
| ANALYSIS AND DESIGN OF COMPUTER AIDED 3D PHYSICAL TRAINING SYSTEM | 262 |
| <i>Baocong Sun</i> | |
| HUGE DATA ANALYSIS AND PROCESSING PLATFORM BASED ON HADOOP | 267 |
| <i>Yuanbin Li, Rong Chen</i> | |
| THE APPLICATION OF SUPER HYDROPHOBIC SURFACE TECHNOLOGY IN THE CORROSION PROTECTION FIELD | 272 |
| <i>Tao Yao</i> | |
| RESEARCH ON APPLICATIONS OF GRAPHENE COMPOSITES IN ELECTROCHEMICAL DETECTION | 277 |
| <i>Xiaoyu Min</i> | |
| ANALYSIS ABOUT RISK CHANGES BEFORE AND AFTER INSPECTION OF 23 STORAGE TANKS AND RESEARCH ON THE INSPECTION STRATEGY | 281 |
| <i>Zhou Fang, Shu Xing, Qi Chen, Gongtian Shen, Yanxiu Zhao</i> | |
| INSPECTION CASE AND ITS FAILURE CAUSE ANALYSIS OF LEAKED STORAGE TANK | 286 |
| <i>Shu Xing, Zhou Fang, Gongtian Shen, Guanghai Li, Yanxiu Zhao</i> | |
| RESEARCH ON APPLICATION OF RISK ASSESSMENT TECHNOLOGY TO 100,000-CUBIC-METER CRUDE OIL STORAGE TANKS | 292 |
| <i>Zhou Fang, Shu Xing, Gongtian Shen, Guanghai Li, Yilin Yuan</i> | |
| SIZE-DEPENDENT AND SHAPE-DEPENDENT ALGAL TOXICITY OF ALUMINUM OXIDE NANOPARTICLES | 297 |
| <i>Wenting Ren, Ruifeng Hou, Shuang Yin, Huan Yao, Xuesong Cao</i> | |
| THE RESEARCH OF REMOVING ELEMENTAL MERCURY IN FLUE GAS BY PEROXIDASE-LIKE CATALYST | 300 |
| <i>Bohua Sun</i> | |
| PHOSPHORUS IN SURFACE SEDIMENTS OF BOHAI SEA AND ADJACENT AREA | 304 |
| <i>Xiang-li LV, Hong Hu, Long-Qiang Li</i> | |
| IDENTIFICATION OF VIRUSES FROM POTATO PLANTED IN WINTER IN GUANGXI BY SMALL RNA DEEP SEQUENCING | 309 |
| <i>Jingjing Song</i> | |
| CONSTRUCTION OF A PLANT BINARY EXPRESSION VECTOR FOR THE POTATO HOST FACTOR GENES STTOM1 AND STTOM3 | 313 |
| <i>Jingjing Song</i> | |
| OPTIMIZATION FOR TIME-LIMITED INTERMODAL TRANSPORTATION ROUTE SELECTION CONSIDERING CARBON EMISSION COSTS | 318 |
| <i>Nan Yu, Zhehui Zhang, Shuhui Zhang</i> | |
| STUDY ON THE STABILITY OF FIBER REINFORCED THERMOPLASTIC VESSEL LINER | 325 |
| <i>Liang Wu, Chenghong Duan, Jinhao Huang</i> | |
| THE EFFECT OF OSTEOGENIC DIFFERENTIATION OF PERIODONTAL LIGAMENT STEM CELLS ISOLATED FROM THE PERIODONTIUM OF HEALTHY TEETH AND PERIODONTITIS-AFFECTED TEETH INDUCED BY SDF-1 | 331 |
| <i>Fengzhi Wang, Jianmin He</i> | |
| AN IDENTITY AUTHENTICATION SCHEME BASED ON OTP FOR MOBILE PAYMENT | 334 |
| <i>Keqiang Xie, Shizhun Jia, Limei Fu</i> | |
| DESIGN AND OPTIMIZATION OF THE LIGHTING ENVIRONMENT FOR THE BRAND CLOTHING STORES BASED ON DIALUX SOFTWARE | 340 |
| <i>Xiao-cong Hu</i> | |
| DYNAMIC SENSITIVITY ANALYSES OF PROJECTILE MUZZLE VELOCITIES | 345 |
| <i>Zhong-feng Luo, Xiao-rong Guan, Cheng Xu</i> | |
| NUMERICAL SIMULATION OF THE MIXING PROCESS OF THE CONTINUOUS MIXER USING THE DISCRETE ELEMENT METHOD | 355 |
| <i>Tao Wang, Qiang Xu, Kaijie Zhang</i> | |
| DESIGN OF INFORMATION ACCESSIBLE WEBSITE FRIENDLY TO SCREEN READING SOFTWARE | 364 |
| <i>Fei Li, Maojang Yao</i> | |
| DESIGN AND IMPLEMENTATION OF PARALLEL PIPELINE PROCESSOR | 370 |
| <i>Hongyu Fan, Hui Zhang, Nan Jiang, Dongwei Guo</i> | |
| DESIGN OF ANT COLONY OPTIMIZATION SIMULATION PLATFORM BASED ON MATLAB GUI | 375 |
| <i>Mengxin Li, Hongshuang Hu, Yong Jiang, Guanhua Feng</i> | |
| A PERFORMANCE TESTING PLATFORM OF ECG ELECTRODES BASED ON AN ACTIVE SKIN-STIMULATION MODEL | 380 |
| <i>Jinzhong Song, Hao Liu, Ming Wei, Zhi Xu, Peng Li, Jinsong Li</i> | |
| RESEARCH ON THE APPLICATION OF FUZZY PETRI NET IN PERSONALIZED EDUCATION | 385 |
| <i>Yu Nie, Guiping Su, Junyi Dai, Yi Sun, Pan Liao</i> | |
| RESEARCH ON ON-LINE TEMPERATURE MONITORING SYSTEM OF POWER CABLE | 391 |
| <i>Dawei Cheng, Dongxu Zhao, Miao Yu</i> | |
| RESEARCH ON STANDARDIZED ACCESS SCHEME FOR ON - LINE MONITORING DATA OF SUBSTATION | 395 |
| <i>Dongxu Zhao, Dawei Cheng, Shouye Xin</i> | |
| KINEMATICS SIMULATION OF 4 DOF MANIPULATOR | 400 |
| <i>Guangbing Bao, Shizhao Liu, Hong Zhao</i> | |
| RESEARCH ON VIRTUAL NETWORK REMAPPING OF DEMAND CHANGE | 409 |
| <i>Yiqiu Fang, Hongjian Wu</i> | |

| | |
|--|-----|
| RESEARCH ON POWER ELECTRONICS TEACHING CASE BASED ON THE SIMULATION OF FREQUENCY CONVERTER | 416 |
| <i>Zhilin Ding, Shuling Feng, Wenping Bu</i> | |
| THE ANALYSIS AND OPTIMIZATION OF PASSENGER SECURITY PROCESS OF TERMINAL BASED ON MONTE CARLO MODEL | 420 |
| <i>Tantai Xinyue</i> | |
| SUPERCritical CARBON DIOXIDE PAPER ARTIFACTS CLEANING | 424 |
| <i>Shi-wei Su</i> | |
| ANALYSIS OF WIND HEATING SYSTEM TO SOLVE WINTER HEATING IN NORTHEAST CHINA | 428 |
| <i>Shi-wei Su</i> | |
| DESIGN AND IMPLEMENTATION OF VIDEO MONITORING SYSTEM FOR DEER SHED BASED ON EMBEDDED TECHNOLOGY | 432 |
| <i>Min Zhang, Yuhua Wu, Ji Li, Shijun Li</i> | |
| IMPROVEMENTS IN OPERATION UNITS OF CAR WELDING WORKSHOP | 437 |
| <i>Qiqi He</i> | |
| RESEARCH OF TOOL NOSE RADIUS IN ULTRASONIC VIBRATION CUTTING FOR DIFFICULT-TO-CUT MATERIALS | 442 |
| <i>Taoxian Huang, Min Xiao</i> | |
| CONSTRUCTION OF ON-LINE OIL MONITORING SYSTEM FOR LARGE MACHINERY | 446 |
| <i>Yongliang Li, Xiaohu Chen, Junkang Chen</i> | |
| PREVENTIVE MAINTENANCE DECISION BASED ON DATA ENVELOPMENT ANALYSIS AND TECHNIQUE FOR ORDER PREFERENCE BY SIMILARITY TO IDEAL SOLUTION | 451 |
| <i>Fen Cheng, Wanxin Hu</i> | |
| REVERSIBLE LANE SCHEME SELECTION MODEL BASED ON THE BPR FUNCTION AND ENVIRONMENTAL BENEFITS | 458 |
| <i>Jiarong Wei, Liying Wei, Yufeng Cui</i> | |
| MODEL OF HYDRAULIC PROJECT DESIGN SCHEME ASSESSMENT BASED ON INFORMATION ENTROPY TOPSIS MODEL | 466 |
| <i>Xiaoyu Han, Yingkui Guo, Saige Li</i> | |
| PARAMETRIC ANALYSIS OF LAMINATED RUBBER BEARINGS WITH FRICTIONAL SLIDING | 473 |
| <i>Yue Li, Qiqi Wu</i> | |
| INFLUENCE AND ANALYSIS OF ROAD WIDTH ON MODELING OF EXPRESSWAY SOUND SOURCE | 477 |
| <i>Xintan Ma, Shichang Feng</i> | |
| RESEARCH ON KEY MANAGEMENT SCHEME FOR MILITARY INTERNET OF THINGS | 481 |
| <i>Haopeng Li, Liyun Chen, Jie Yan, Wenxin Qiao</i> | |
| ANALYSIS ON PENETRATION OF BALLISTIC MISSILE AND DETECTION IN REENTRY PHASE | 487 |
| <i>Jun-chao Yuan, Xiao-kuan Zhang, Mao Liu</i> | |
| RESEARCH ON INITIAL ALIGNMENT OF ALL-ATTITUDE INERTIAL PLATFORM ON STATIC BASE | 493 |
| <i>Hongjie Zhang, Shifeng Zhang</i> | |
| ANALYSIS ON THE SECURITY THREAT OF CAISSON GRAVITY WHARF | 500 |
| <i>Qi Dong, Ting TanG, Zhuo-bin Wei</i> | |
| EDGE DETECTION ALGORITHM OF DALIUSHU RIVER BASED ON ADAPTIVE WEIGHTED MORPHOLOGY | 506 |
| <i>Lingxiao Huang, Chunguang Li, Lanxiang Zheng, Hefang Jing, Xuande Zhang, Hailong Ma</i> | |
| THE APPLICATION OF MULTI-LEVEL FUZZY EVALUATION SYSTEM IN URBAN SUSTAINABLE DEVELOPMENT | 512 |
| <i>Ruiwei Feng</i> | |
| KEY PARAMETER IDENTIFICATION OF QUAD-ROTOR AIRCRAFT SYSTEM BASED ON CIFER ALGORITHM | 516 |
| <i>Hao-ran Qi, Xiao-hui Qi</i> | |
| AERODYNAMIC MODELING AND SIMULATION OF FLEXIBLE WING ACTIVE DEFORMATION BASED ON PIEZOELECTRIC MATERIAL | 523 |
| <i>Zhuo Han, Zhengjie Wang</i> | |
| CLUTTER SIMULATION OVERVIEW | 530 |
| <i>Yawei Liu, Zhiqiang Li</i> | |
| APPLICATION OF TIME DOMAIN TWO - DIMENSIONAL ACQUISITION METHOD IN SPREAD SPECTRUM SYSTEM | 535 |
| <i>Xingyuan Xu, Lili Xia, Sifang Liu</i> | |
| STUDY ON DOPPLER CORRECTION IN DEMODULATION OF DIGITAL SIGNALS | 540 |
| <i>Xingyuan Xu, Lili Xia, Sifang Liu</i> | |
| ANALYSIS OF THE EFFECT OF TARGET SCATTERING ON THE OPERATIONAL EFFECTIVENESS OF SEEKER | 544 |
| <i>Jun-chao Yuan, Xiao-kuan Zhang, Sheng-yuan Wu, Mao Liu</i> | |
| RESEARCH AND DESIGN OF BALLISTIC MISSILE AGAINST LARGE SHIP SIMULATION SYSTEM | 550 |
| <i>Qun Yao, Jian-sheng Shu, Bin-wei Zhang</i> | |
| OPTIMIZATION RESEARCH AND APPLICATION OF ENTERPRISE WEBSITE BASED ON WEB SERVICE | 557 |
| <i>Hongyan Chen, Junwei Wan, Jing Zhao</i> | |
| THE REVIEW OF GENERAL WIRELESS COMMUNICATION SIGNAL TO S - BAND PULSED RADAR FUZE SIGNAL INTERFERENCE | 564 |
| <i>Pengfei Wang</i> | |

| | |
|--|-----|
| APPLICATION OF VIRTUAL INSTRUMENT IN THE PLUNGER PUMP VIBRATION TEST | 571 |
| <i>Zhengyi Zhang, Chuntong Liu, Hongcai Li, Zhenxin He, Xiaofeng Zhao, Jianfeng Yu</i> | |
| MODIFIED MODELS ABOUT SECURITY CHECK IN AIRPORTS | 575 |
| <i>Suting Gao</i> | |
| RESEARCH ON LADDER WAVE - SPECIFIC HARMONIC ELIMINATION TECHNOLOGY FOR CASCADE H - BRIDGE CONVERTER | 579 |
| <i>Suting Gao</i> | |
| STUDY ON SMART GROWTH METRIC MODEL | 583 |
| <i>Xiaolong Xu</i> | |
| DEVELOPMENT STATUS AND PROSPECT OF PARKING ASSIST SYSTEM | 587 |
| <i>Huang-wei Zhang, Ke-yin Wang, Hai-ying Huang</i> | |
| THE PENETRATION PERFORMANCE RESEARCH OF ARROW SHAFT WARHEAD DAMAGE ELEMENT | 592 |
| <i>Yachao Guo, Guanglin He, Jiashuo Zhang</i> | |
| STUDY ON ABLATION WEAR OF GUN | 598 |
| <i>Jianjie Zhu, Liping Zheng, Yingxiu Cao</i> | |
| THE RESEARCH OF IMPROVEMENT ON MICROSTRUCTURE AND PROPERTIES OF TIC-TIB₂ COMPOSITE CERAMIC PREPARED BY SHS CENTRIFUGAL CASTING | 604 |
| <i>Wenbin Pen, Zhongmin Zhao</i> | |

PART 2

| | |
|--|-----|
| ACCURATE CONTROL OF AMT GEAR SHIFTING BASED ON FUZZY ADAPTATION | 609 |
| <i>Yulong Lei, Yuchen Zhang, Yao Fu, Bo Yan</i> | |
| OPTIMIZATION DESIGN OF ELECTRIC VEHICLE CHARGING PILE BASED ON COIL MAGNETIC RESONANCE COUPLING CONTROL | 615 |
| <i>Jian-Rui Xu, Xing-Hua Lu, Ming-Ming Ye, Jian-Xin Xue</i> | |
| DESIGN OF PRESSURE VESSEL CYLINDER BASED ON RELIABILITY ANALYSIS | 623 |
| <i>Xingxu Li, Chenghong Duan</i> | |
| COMPARATIVE ANALYSIS OF TWO SCHEMES OF A PRECISION VERTICAL MACHINING CENTER | 627 |
| <i>Qiang Cheng, Guobin Yan, Baobao Qi, Bawei Zhao</i> | |
| NUMERICAL SIMULATION ANALYSIS OF MODEL SIMPLIFICATION AND HEAT TRANSFER IN POSITION ENGINEERING | 632 |
| <i>Yuan Liu, Shunbo Liu, Haiding Zhang</i> | |
| A FRACTAL LOAD MODEL OF CONCRETE-STEEL JOINT INTERFACE | 637 |
| <i>Yong-Sheng Zhao, Hao Wang, Zhi-Feng Liu, Li-Gang Cai</i> | |
| ANALYSIS OF HUMAN-MACHINE COOPERATIVE ROBOT AND HAPTIC INTERACTION FOR STROKE REHABILITATION | 643 |
| <i>Zhiqin Qian, Tingting Jiang, Yifan Liu, Zhuming Bi</i> | |
| STUDY ON THE DESIGN AND SIZE EFFECT OF SCALED MODEL FOR INFLATED FABRIC MEMBRANE | 649 |
| <i>Fen Zhang, Shiming Zhou, Jiehong Yuan</i> | |
| DEVELOPMENT STATUS AND PROSPECTS OF PUNCH PHYSICAL SECURITY SYSTEMS | 656 |
| <i>Xin-peng Li, Chao-yong Guo</i> | |
| DESIGN AND OPTIMIZATION OF A NOVEL MICRO-STEP ROTARY ACTUATOR WORKTABLE | 660 |
| <i>Xiaozhou Zheng, Xue Wang</i> | |
| RESEARCH ON VERTICAL WELDING PROCESS OF ARC WELDING ROBOT | 669 |
| <i>Wenming Zhang, Zhihai Dong</i> | |
| MULTI-SENSOR SYSTEM FOR INDOOR ENVIRONMENT MONITORING | 675 |
| <i>Zheng-yu Wang, Xiao-ru Zhang</i> | |
| THE METHOD AND BASIS OF DAM LOCATION SELECTION | 681 |
| <i>Yuxuan Yang</i> | |
| TWO DESIGN OF NEW TOLL STATION BASED ON PROBABILITY DISTRIBUTIONS AND QUEUEING THEORY | 685 |
| <i>Le Wang</i> | |
| APPLICATION OF PRINCIPAL COMPONENT ANALYSIS IN MEASURING WATER SUPPLY CAPACITY | 689 |
| <i>Dejie Zhao</i> | |
| STUDY ON THE WATER TEMPERATURE OF A BUBBLE BATH | 693 |
| <i>Shanghe Chi</i> | |
| DYNAMIC SIMULATION AND CURVE FITTING OF FOLDING FURNITURE BASED ON GEOMETRIC ANALYSIS AND MATLAB | 697 |
| <i>Wenqi Zhang</i> | |
| APPLICATION OF DIJKSTRA ALGORITHM IN OPEN EVALUATION OF COMMUNITY | 702 |
| <i>Zengji Wang</i> | |
| APPLICATION OF LOGISTIC MODEL IN CITY DEVELOPMENT FORECAST | 706 |
| <i>Xiaoshuai Wu</i> | |
| HOW TO KEEP BATHTUB WATER TEMPERATURE COMFORTABLE OVER TIME | 711 |
| <i>Chang Cui</i> | |
| PROGRESS IN RESEARCH OF AUTOMOBILE EXHAUST PURIFICATION | 717 |
| <i>Chang Cui</i> | |

| | |
|---|-----|
| THE DESIGN OF A NEW TYPE OF IRONS | 721 |
| <i>Benke Hao</i> | |
| A STUDY ON HOW TO KEEP THE TEMPERATURE OF THE WATER WHEN BATHING | 726 |
| <i>Yajie Xu</i> | |
| A MODEL FOR REPLACING THE KALIBA DAM BASED ON MULTI-DAM SYSTEM | 731 |
| <i>Yajie Xu</i> | |
| DESIGN OF A NEW TYPE OF TOLL PLAZA ON THE HIGHWAY | 736 |
| <i>Tong Liu</i> | |
| STUDY ON THE INFLUENCE OF CELL OPENING ON TRAFFIC CONDITION BASED ON CIRCUIT ANALOGY THEORY | 740 |
| <i>Bin Yang</i> | |
| THE DESIGN OF THE MOORING SYSTEM | 744 |
| <i>Yating Liu</i> | |
| MODELING AND SIMULATION OF THE COMMUNICATION CHANNEL OF SPACECRAFT REENTRY | 748 |
| <i>Honghui Mu</i> | |
| DYNAMIC SOCIETY'S INFORMATION NETWORKS BASED ON THE COMPLEX NETWORK THEORY AND THE DYNAMICS OF INFECTIOUS DISEASE: PART1. MODEL THEORY | 755 |
| <i>Han Xu</i> | |
| DYNAMIC SOCIETY'S INFORMATION NETWORKS BASED ON THE COMPLEX NETWORK THEORY AND THE DYNAMICS OF INFECTIOUS DISEASE: PART2. MODEL TESTING | 759 |
| <i>Han Xu</i> | |
| ANALYSIS OF ENERGY CONSERVATION ON APPLICATION OF VARIABLE OF FREQUENCY TECHNOLOGY IN PUMP AND FAN SYSTEM IN POWER PLANTS | 763 |
| <i>Xinyue Guo</i> | |
| QUEUING MODEL FOR BLOCKING OF AIRPORT PASSENGER FLOW | 768 |
| <i>Xinyu Xing</i> | |
| IMPROVEMENTS IN THE PIGMENT-BASED INKJET PRINTING PERFORMANCE OF POLY(LACTIC ACID) NONWOVEN FABRIC BY SURFACE COATING USING POLYACRYLAMIDE | 772 |
| <i>Ya-Dong Li, Zhanghua Zhao, Jinping Guan, Ren-Cheng Tang</i> | |
| PRINCIPLE AND CONTROL TECHNOLOGY OF AUTOMOBILE BRAKING NOISE | 776 |
| <i>Yuanpeng Zhu</i> | |
| A CHLOROGENIC ACID MEDIATED SYNTHESIS OF SILVER NANOPARTICLES AND THEIR APPLICATION FOR THE ANTIBACTERIAL FUNCTIONALIZATION OF SILK FIBER | 781 |
| <i>Ling-Ling Li, Ren-Cheng Tang</i> | |
| FORMATION MECHANISM OF ANODIC TiO₂ NANOTUBES | 785 |
| <i>Hang Shi</i> | |
| RESEARCH ON MAXIMUM POWER TRACKING METHOD OF PHOTOVOLTAICS | 789 |
| <i>Lingtian Chen, Changliang Liu</i> | |
| COLORATION AND FUNCTIONAL MODIFICATION OF SILK FIBER VIA DOPAMINE POLYMERIZATION | 795 |
| <i>Xiao-Hui Kuang, Jin-Ping Guan, Wei Chen, Ren-Cheng Tang, Guo-Qiang Cheng</i> | |
| DESIGN AND IMPLEMENTATION OF ZIGBEE - WI-FI WIRELESS GATEWAY BASED ON EMBEDDED SYSTEM | 799 |
| <i>Hong-mei Liu</i> | |
| CALIBRATION OF COMPONENTS IN AN OPTICAL MEASUREMENT SYSTEM FOR OBTAINING 3D DATA OF COMPLEX PARTS | 806 |
| <i>Hongzhi Jiang, Yang Zhou</i> | |
| RESEARCH ON DESIGN OF WEAK CURRENT MEASUREMENT SYSTEM BASED ON I-V CONVERTOR | 812 |
| <i>Zicheng Guo, Guofu Liu, Shilin Wu, Mao Li</i> | |
| DYNAMIC MODELING AND TEST VERIFICATION OF TANK MULTI - BODY SYSTEM | 818 |
| <i>Bing-fei Hao, Hong-yan Wang, Qiang Rui, Qin-long Wang</i> | |
| RESEARCH ON THE METHOD FOR IDENTIFICATION OF DEFECTS OF AUTOMOBILE BRAKE SYSTEM BASED ON THE CASE-BASED REASONING | 824 |
| <i>Honglei Dong, Yuzhong Chen, Yan Wang, Lingyun Xiao</i> | |
| RESEARCH ON DYNAMIC MODELING OF SINGLE LEG OF WHEELING & WALKING ELECTRIC VEHICLE BASED ON RECURDYN | 830 |
| <i>Junwen Xing, Zhen Dong, Wenbin Chai, Zhenxing Li</i> | |
| OPTIMIZATION OF PULSE CVT BASED ON IMPROVED PARTICLE SWARM ALGORITHM | 835 |
| <i>Zhongkang Song, Peng Wang, Lianqiang Bai</i> | |
| RESEARCH ON ENTROPY PROPERTIES COMPARISON OF DIFFERENT ONE-DIMENSIONAL CHAOTIC MAPS | 840 |
| <i>Xing-hua Hu, Lei-fu Gao</i> | |
| COMPLETE CONVERGENCE FOR WEIGHTED SUMS OF ARRAYS OF ROWWISE NEGATIVELY DEPENDENT RANDOM VARIABLES | 848 |
| <i>Bing Meng, Dingcheng Wang</i> | |
| SPATIAL VARIATION OF SOIL MOISTURE CONTENT AND SOIL WATER REPELLENCY IN THE SUGARCANE LAND | 854 |
| <i>Huanzhuang Tao</i> | |

| | |
|--|------|
| EFFECTS OF EXTERNALLY SUPPLIED BSA ON ZR, IAA, ABA, GA OF PLANT CINNAMOMUM CAMPHORA CUTTING SEEDLINGS AND ROOT..... | 859 |
| <i>ShaoHui Huang</i> | |
| DESIGN OF HIL TEST SYSTEM FOR VCU OF PURE ELECTRIC VEHICLE | 867 |
| <i>Pengpeng Nie, Youyu Wu, Xiaoyu Liang</i> | |
| RESEARCH ON EMERGENCY EVACUATION OF SUBWAY STATION BASED ON MOBILE CAPABILITY | 872 |
| <i>Jinxing Ying, Jin Li</i> | |
| STEP AP242 FORMAT EXPRESSION AND DEVELOPMENT OF MBD MODEL | 876 |
| <i>Shengting Fan, Yong Yu, Sheng Dai, Peng Cao, Gang Zhao</i> | |
| AUTO-FOCUS SYSTEM BASED ON GENERAL HARDNESS TESTER..... | 883 |
| <i>Kunyang Cao, Xiaodong Lv, Jingtao Wang, Yimin Dong, Xiuchun Li</i> | |
| DESIGN AND IMPLEMENTATION OF THE SYSTEM OF THE ELECTRIC VEHICLE PHOTOVOLTAIC CHARGING | 890 |
| <i>Xiao-xia Li</i> | |
| ANALYSIS ON STABILITY OF DIKE IN WATER DIVERSION OF RIVER BANK | 896 |
| <i>Xiaocheng Su</i> | |
| A COST-EFFECTIVE PARALLEL ALGORITHM OF DISTRIBUTION NETWORK RECONFIGURATION ON HADOOP CLUSTER..... | 900 |
| <i>Wanxing Sheng, Keyan Liu, Shupeng Zhou, Song Jin, Wei Tang</i> | |
| COMPLEX NETWORK THEORY IN URBAN TRAFFIC NETWORK | 910 |
| <i>Mengxin Li, Jingyi Han</i> | |
| MODELING FOR THE COMPACTNESS OF URBAN SPATIAL FORM..... | 914 |
| <i>Rui Wang</i> | |
| AN AHP-BASED EVALUATION SYSTEM OF URBAN HEALTHY GROWTH..... | 917 |
| <i>Rui Wang</i> | |
| LITHIUM BATTERY AND SUPER CAPACITOR HYBRID ENERGY STORAGE SYSTEM CONTROL METHOD RESEARCH..... | 922 |
| <i>Kaidi Yang, Rong Ju, Shuiming Jiang</i> | |
| RESEARCH ON CLOUD MODEL CONTROL STRATEGY FOR WIND FARM AND ENERGY STORAGE SYSTEM..... | 928 |
| <i>Shuiming Jiang, Rong Ju, Kaidi Yang</i> | |
| PRESENT SITUATION AND DEVELOPMENT TREND OF WELDING ROBOT | 933 |
| <i>Wenming Zhang, Zhihai Dong, Zhanqi Liu</i> | |
| IRIS SEGMENTATION BASED ON ELLIPSE DETECTION FOR GAZE TRACKING SYSTEM..... | 937 |
| <i>Yumeng Zhang, Cai Meng</i> | |
| RESEARCH ON SENSORLESS CONTROL STRATEGY OF PMSM BASED ON AN IMPROVED SLIDING MODE OBSERVER..... | 942 |
| <i>Suying Zhang, Peidi Zhao, Xue Du, Ji Jin, Huixian Liu</i> | |
| THE EFFECT OF ROTATION SPEED ON CAVITATION OF SMALL FLOW MICRO - HIGH SPEED CENTRIFUGAL PUMP..... | 947 |
| <i>Shuai Hu, Wenwu Song, Qianyu Xu, Jianwei Shi</i> | |
| FLEXIBLE JOB SHOP SCHEDULING MODEL WITH PARALLEL PROCESSES BASED ON GENETIC ALGORITHM | 953 |
| <i>Bo Bao, Lin Zhang, Bo Zhang</i> | |
| RESEARCH ON AUDIO AND VIDEO SYNCHRONIZATION ALGORITHM BASED ON AVI FORMAT..... | 959 |
| <i>Min Zhang, Yu-Hua Wu, Ji Li, Shi-Jun Li</i> | |
| FUZZY COMPREHENSIVE EVALUATION ON THE HARMFULNESS OF MAGNETIC FIELD IN 500KV SUBSTATIONS TO HEALTH OF WORKERS | 963 |
| <i>Jing Wang, Xin Zhao, Hongjian Yang, Yang Gao, Tao Chen</i> | |
| STUDY ON THE PERFORMANCE OF SIC NEUTRON DETECTOR..... | 967 |
| <i>Mao Li, Lijeng Ji, Guofu Liu</i> | |
| DESIGN AND IMPLEMENTATION OF AN INTELLIGENT MEDICINE BOX CAPABLE OF DETECTING USER'S MEDICATION TAKING STATE | 972 |
| <i>Tian-Li Hu, Hong-Zhi Qian</i> | |
| ANALYSIS OF WATER TEMPERATURE IN BATHTUB UNDER RADIATION AND CONVECTION HEAT TRANSFER..... | 979 |
| <i>Yanfang Wang</i> | |
| ANALYSIS OF WATER TEMPERATURE DISTRIBUTION IN BATHTUB..... | 983 |
| <i>Yanfang Wang</i> | |
| THE MOORING SYSTEM DESIGN BASED ON GENETIC ALGORITHM | 987 |
| <i>Yating Liu</i> | |
| DSMC SIMULATION ON COUETTE FLOW IN MICRO-CHANNELS | 991 |
| <i>Xi Ze</i> | |
| THE DESIGN OF CHILDREN'S EDUCATIONAL TOYS | 995 |
| <i>Fangmin Yuan, Junchao Zhang</i> | |
| THE OPTIMAL DESIGN OF BUS LINES | 1000 |
| <i>Lin Zhang</i> | |
| THE EVALUATION OF BUS LINES..... | 1005 |
| <i>Lin Zhang</i> | |

| | |
|--|------|
| NOAH'S ARK ON MARS | 1010 |
| <i>Xiao Man Luo</i> | |
| MODEL FOR POPULATION ZERO | 1014 |
| <i>Xiao Man Luo</i> | |
| PSD SIGNAL CONDITIONING DEVICE | 1018 |
| <i>Zhen Yang</i> | |
| INTRODUCTION OF SOLAR THERMAL OIL CIRCULATION PIPELINE AND ITS NUMERICAL SIMULATION | 1023 |
| <i>Zhen Yang</i> | |
| A SOLUTION BASED ON CELLULAR AUTOMATON FOR MERGING AFTER TOLL | 1028 |
| <i>Wenjing Xiao</i> | |
| PREPARATION OF SUPER HYDROPHOBIC COATING FOR INSULATOR AGAINST ICING FLASHOVER | 1032 |
| <i>Tao Yao</i> | |
| OPTIMIZATION MODEL OF WIND FARM | 1039 |
| <i>Xueying Ding</i> | |
| THE RESEARCH OF THE SMART GROWTH BASED ON THE GRAY PREDICTION ANALYSIS | 1043 |
| <i>Chuxuan Zhang</i> | |
| THE RESEARCH OF THE SMART GROWTH BASED ON AHP | 1047 |
| <i>Chuxuan Zhang</i> | |
| THE INTELLIGENT TEMPERATURE CONTROL SYSTEM BASED ON GREENHOUSE | 1052 |
| <i>Ziying Sun</i> | |
| THE DESIGN OF INTELLIGENT HEAT DISSIPATOR CONTROL CIRCUIT | 1057 |
| <i>Biqing Li, Zhao Li, Qiang Li</i> | |
| RESEARCH ON VERTICAL BEARING CAPACITY OF RAM-COMPACTED PILE WITH VIBRATING GRAVEL BASE IN COLLAPSIBLE LOESS FOUNDATION | 1062 |
| <i>Yifan Yang, Lin Zhu, Haoyu Ma</i> | |
| SPEECH EMOTION RECOGNITION BASED ON FEATURE FUSION | 1071 |
| <i>Qi Shen, Guanggen Chen, Lin Chang</i> | |
| PENETRATION PATTERN RECOGNITION BASED ON ARTIFICIAL NEURAL NETWORK | 1075 |
| <i>Shuo Wang, Quan Shi</i> | |
| THE STUDY ON HEAT TRANSFER OF THE BATHTUB | 1080 |
| <i>Ziman Guo</i> | |
| A MODEL OF DETECTING PHISHING WEBSITES BASED ON PHA AND WEB NOISE | 1084 |
| <i>Jing-shi Cui, Zi-jian Wang, Bai-ling Wang, Wei Wang, Guo-dong Xin</i> | |
| CONSTRUCTION OF AGING MODEL AND COMPENSATION BASED ON NONLINEAR TIME SERIES ANALYSIS | 1091 |
| <i>Yi Zhang, Zhi-Juan Zhang</i> | |
| BRAKE COMPENSATION CONTROL FOR IN-WHEEL MOTOR DRIVE SYSTEM FAILURE | 1097 |
| <i>Run Sheng Zhang, Liang Li, Si Long Zhang, Wei Zhang, Li Peng Zhang</i> | |
| QUALITY EVALUATION FOR EXISTING STRUCTURE OF HIGHWAY BRIDGE AFTER YEARS OF SHUTDOWN | 1108 |
| <i>Yu Tang, Dun-wen Liu</i> | |
| STUDY OF CONTINUOUS BLOOD PRESSURE MEASUREMENT BASED ON SINGLE LEAD PULSE WAVE | 1115 |
| <i>Gang Zheng, Lin-Lin Fan, Jia Qi</i> | |
| DESIGN OF A NEW ENGINE TRANSMISSION MECHANISM BASED ON GEARS AND RACKS | 1122 |
| <i>Ze Yang, Jianyong Li, Mingxu Wang, Xinghua Gao</i> | |
| DESIGN AND SIMULATION OF REACTIVE DIVIDING-WALL DISTILLATION COLUMN FOR TRANSESTERIFICATION OF METHYL ACETATE WITH N-PROPANOL | 1127 |
| <i>Jiashuang Feng</i> | |
| RESEARCH ON THE AVAILABILITY EVALUATION OF COMMAND INFORMATION SYSTEM | 1136 |
| <i>Xiaofeng Mu, Weiming Zhang, Peng Lin, Xiaoli Li</i> | |
| RESEARCH ON MODULAR DESIGN OF DIESEL KEY PARTS AND DATA MANAGEMENT TECHNOLOGY | 1143 |
| <i>Jibin Hao, Zhaohua Chen, Qiangbo Xu, Jing Cao, Xi Chen</i> | |
| USING THE MATLAB SOFTWARE FOR MUSIC ARRANGER AND CREATION | 1153 |
| <i>Yanan Zhu, Li Zhang</i> | |
| HALF QUADRATIC REGULARIZATION MODEL FOR IMAGE RESTORATION | 1157 |
| <i>Xuchao Li, Songyan Ma, Yuye Li</i> | |
| CONSTRUCTION OF DIESEL DOMAIN ONTOLOGY | 1163 |
| <i>Dingguo Sheng, Zhaohua Chen, Jibin Hao, Guijian Xia, Zhikun Guo</i> | |
| ANALYSIS AND COMPARISON BETWEEN REFERENCE HARMONIC CURRENT DETECTION STRATEGIES ADOPTED IN (APF) CONTROL METHODS | 1174 |
| <i>Mishawu Adam, Yuepeng Chen, Xiangtian Deng</i> | |
| APPLICATION OF SINGLE NEURON ADAPTIVE PID APPROACH IN ROLLING TENSION CONTROL | 1185 |
| <i>Xiao-dan Zhang, Yan-ming Cheng, Yu-xiang Hao</i> | |
| RESEARCH ON EXCHANGE RATE FORECASTING MODEL BASED ON ARIMA MODEL AND ARTIFICIAL NEURAL NETWORK MODEL | 1191 |
| <i>Min Xu, Weiguo Li</i> | |

| | |
|--|------|
| RESEARCH ON NETWORK INTRUSION DETECTION TECHNOLOGY IN DYNAMIC AND COMPLEX BACKGROUND | 1197 |
| <i>Wen-kui Zheng, Kun Liu</i> | |
| RESEARCH ON EDGE DETECTION ALGORITHM IN DIGITAL IMAGE PROCESSING | 1203 |
| <i>Wen-kui Zheng, Kun Liu</i> | |
| RESEARCH ON THE COMPRESSION METHOD FOR DOMESTIC AIR CONDITIONER WITH WATER VAPOR AS THE REFRIGERANT | 1209 |
| <i>Xing Xue, Sheng Li, An Wang</i> | |
| THE NOISE ANALYSIS OF MICRO COMBINED HEAT AND POWER SYSTEM | 1216 |
| <i>Chao Zhang, Maolin Cai, Weiqing Xu, Yan Shi</i> | |

PART 3

| | |
|--|------|
| EFFECT OF ANNEALING TIME AND ANNEALING ATMOSPHERE ON INFRARED EMISSIVITY PROPERTY OF $Zn_{1-x}CO_xO$ BY SOLID STATE REACTION | 1221 |
| <i>Yongmei Zhu, Shujuan Tan, Guoyue Xu, Tengchao Guo</i> | |
| THE THERMAL PROPERTIES OF ERYTHRITOL/ADIPIC ACID COMPOSITE PHASE CHANGE MATERIAL | 1226 |
| <i>Shile Shen, Shujuan Tan, Guoyue Xu, Tengchao Guo</i> | |
| EXPERIMENTAL ANALYSIS OF MICRO-CHP SYSTEM BASED ON GAS ENGINE | 1231 |
| <i>Teng Ren, Xiang Zhou, Weiqing Xu, Maolin Cai, Yan Shi</i> | |
| THE CONTROL OF HEAT EXCHANGER OUTLET TEMPERATURE BASED ON SMITH PREDICTOR AND DYNAMIC MATRIX CONTROL | 1236 |
| <i>Ruifeng Li, Liang Wang</i> | |
| RESEARCH ON IMPROVEMENT PLAN OF LOW-VOLTAGE AREA LINE LOSS CALCULATION | 1241 |
| <i>Bo Ruan, Yu Li, Bu-han Zhang, Fu-wen Su</i> | |
| RESEARCH ON HARDNESS AND FRACTURE TOUGHNESS OF 45 STEEL BEFORE AND AFTER HYDROGEN SULFIDE CORROSION | 1248 |
| <i>Yanfei Sun, Jing Wang</i> | |
| NUMERICAL STUDY ON DYNAMIC STIFFNESS HYDROSTATIC BEARING | 1255 |
| <i>Yong-xie Wang, Xiao-yang Li, Jun-wu Wen</i> | |
| STUDY ON PLATING PARAMETERS FOR PREPARING NI-TIN NANOCOATINGS BY USING ARTIFICIAL NEURAL NETWORKS | 1261 |
| <i>Fafeng Xia, Wanchun Jia, Chunyang Ma</i> | |
| STUDY ON DYNAMIC RELIABILITY OF BARREL SHELL BASED ON RBF NEURAL NETWORK | 1265 |
| <i>Zhifei Song, Huijun Li, Biao Li, Jinlei Qin</i> | |
| PREPARATION AND CHARACTERIZATION OF UV CURABLE COMPLEX SYSTEM BASED ON VINYL RESIN AND POLYURETHANE ACRYLATE PREPOLYMER | 1270 |
| <i>Can Zhao, Yenan Sun, Jijun Xiao</i> | |
| QUANTIFICATION OF CELL ADHESION FORCE WITH ATOMIC FORCE MICROSCOPE | 1276 |
| <i>Sheng Chen, Hui Xie</i> | |
| CHANGE IN SOLUBLE SUGAR AND ORGANIC ACIDS DURING FERMENTATION OF DRAGON FRUIT WINE | 1284 |
| <i>Xiao Gong, Lina Ma, Junwei Yin, Mao Lin, Jihua Li</i> | |
| DESIGN OF HOSPITAL BEDS CENTER MANAGEMENT INFORMATION SYSTEM BASED ON HIS | 1289 |
| <i>Lu Ren, Xiaofei Zhang, Jingxia Wang, Mei Sun, Siyuan Tang, Ni Gong</i> | |
| DESIGN AND APPLICATION OF OCCUPATION EXPOSURE DECLARATION AND MONITORING INFORMATION SYSTEM FOR MEDICAL STAFF | 1295 |
| <i>Xiaofei Zhang, Lingli Dai, Lu Ren, Siyuan Tang</i> | |
| DESIGN AND PERFORMANCE ANALYSIS OF WINDOWS-BASED SERIAL-SOCKET BRIDGE | 1301 |
| <i>Xin Liu, Zhiqiang Wei</i> | |
| QUANTITATIVE TRADING STRATEGY OF MARKET STATES PREDICTION BASED ON HMM | 1309 |
| <i>Zhongjie Fu, Qingqiang Wu</i> | |
| STUDY ON OPTIMIZATION AND SIMULATION OF HYDROFOIL USV PROPULSION INTELLIGENT CONTROL BASED ON CHAOS ALGORITHM | 1320 |
| <i>Yang Li, Songlin Yang, Yongqiang Yu, Man Liu</i> | |
| RESEARCH ON STAGE LIGHTING CONSOLE BASED ON BP NEURAL NETWORK HANDWRITING RECOGNITION | 1328 |
| <i>Linhan Dai, Tiantian Tang, Zhijian Yin</i> | |
| POSE MEASUREMENT FOR CAPTURE OF LARGE SATELLITE DOCKING RING BASED ON DOUBLE-LINE STRUCTURED LIGHT VISION | 1336 |
| <i>Jun Yang, Xuehai Gao, Zhiheng Li, Shunzhi Li, Bin Liang</i> | |
| DESIGN AND IMPLEMENTATION OF AGRICULTURAL INFORMATION SERVICE PLATFORM BASED ON STREAMING MEDIA TECHNOLOGY | 1346 |
| <i>Xinlei Jin, Na Zhang</i> | |
| APPLICATION OF MODIFIED CLOSE VALUE METHOD IN POWER QUALITY EVALUATION | 1353 |
| <i>Ren Hu, Zhaoxia Jing, Qinghua Wu, Renbao Yan, Xin Zhang</i> | |
| STANDARD FOR DESIGN OF MODERN ELECTRIC DISTRIBUTION SYSTEM ANALYSIS | 1361 |
| <i>Dongxue Li, Jiye Yang, Chuang Yan, Qiang Ma, Dayong Yu, Tianqi Lu</i> | |

| | |
|--|------|
| THE ENVIRONMENTAL DYNAMIC VALUE AND MODEL OF CR IN MARINE BAY | 1367 |
| <i>Dongfang Yang, Haixia Li, Xiaolong Zhang, Jiangmin Li, Nan Nan</i> | |
| RESEARCH ON ENVIRONMENTAL TEST ON-LINE DETECTION DEVICE BASED ON FLOW METROLOGICAL INSTRUMENT | 1371 |
| <i>Fanliang Meng, Senlin Gao, Quan Sun, Xiaoping Zhang, Xigang Wang</i> | |
| DOUBLE CLOSED LOOP CONTROLLER OF WHEELED MOBILE ROBOT FOR TRAJECTORY TRACKING BASED ON BACK-STEPPING AND LYAPUNOV METHOD | 1376 |
| <i>Limin Du</i> | |
| RESEARCH ON COMPUTER NETWORK SECURITY BASED ON DATA ENCRYPTION TECHNOLOGY | 1383 |
| <i>Yicong Zhang, Shujun Zhou</i> | |
| DESIGN AND IMPLEMENTATION OF INSTRUMENT NA BASED ON WMN | 1388 |
| <i>Fangfei Wu, Meihua Yu, Jun Peng, Yina Guo</i> | |
| MODELING STUDY ON THE HAZARDOUS EFFECTS OF BATTLEFIELD CHEMICAL ATTACK | 1394 |
| <i>Jin Gu, Xuezheng Zhu, Kunlin Nie</i> | |
| DETERMINATION OF TRACE IRON IN THREE KINDS OF TONIC HERBS BY DUAL-INDICATOR DUAL-WAVELENGTH AND CATALYTIC KINETIC SPECTROPHOTOMETRIC METHOD | 1400 |
| <i>Shuang Fu, Qi Lin, Dezhi Ma, Zhanle Wang</i> | |
| SWOT RESEARCH ON DOMESTIC THIRD-PARTY LOGISTICS PROVIDERS (3PLPS) IN KOREA | 1407 |
| <i>Yu Liu</i> | |
| STUDY ON CONTROL OF SINGLE PHASE GRID-CONNECTED INVERTER BASED ON FRACTIONAL ORDER PI CONTROLLER | 1414 |
| <i>Ping Jiang, Hai-jian Lv, Li-ying Wang</i> | |
| QOS MANAGEMENT SYSTEM OF SMART GRID COMMUNICATION NETWORK BASED ON SDN TECHNOLOGY | 1421 |
| <i>Meng Yin, Yong-en Wang, Jie Shen, Chenbo Yuan</i> | |
| SUBSTATION COMMUNICATION NETWORK ARCHITECTURE EVALUATION BASED ON THE DESTRUCTIVE NATURE OF RELIABILITY AND SURVIVABILITY | 1430 |
| <i>Meng Yin, Jie Shen, Min Zhu, Zhifang Wang</i> | |
| THE COMPARATIVE ANALYSIS OF FOURIER TRANSFORMATION AND HILBERT HUANG TRANSFORMATION BASED ON DYNAMIC EEG DATA | 1439 |
| <i>Yifeng Li, Lihui Zhang, Baohui Li, Zhao Jin, Haixia Wang, Rong Lin</i> | |
| PROMOTED MOTION-SENSING GESTURAL INTERACTION BY ADAPTING TO GROUP USERS' SPATIAL MOVEMENTS | 1448 |
| <i>Xiaolong Lou, Xiangdong Li, Ren Peng, Weidong Geng</i> | |
| STUDY ON THE FRAGILITY OF THE BANKING SYSTEM -- APPLICATION OF ENTROPY METHOD | 1460 |
| <i>Pengyu Li, Zhigang Zhang</i> | |
| AN ULTRASONIC RANGING SYSTEM BASED ON FPGA | 1469 |
| <i>Mengjiao Wu, Jun Yang</i> | |
| SEDIMENTATION PROCESS AND MECHANISM OF CD IN JIAOZHOU BAY | 1477 |
| <i>Dongfang Yang, Zhikang Wang, Chunhua Su, Sixi Zhu, Fengyou Wang</i> | |
| APPLICATION LEVEL EVALUATION INDEX SYSTEM AND MODEL CONSTRUCTION OF AGRICULTURAL IOT IN THE WHOLE INDUSTRIAL CHAIN OF AGRICULTURE | 1481 |
| <i>Jianzhai Wu, Jianhua Zhang, Shuqing Han, Xiangyang Zhou, Mengshuai Zhu, Fantao Kong</i> | |
| STUDY ON THE OF FUNGI ANTINEOPLASTIC CONSTITUENTS IN ROOT PLANT OF ACANTHUS ILICIFOLIUS L | 1492 |
| <i>Wanke Zhang, Dulin Kong, Rui Yang, Juan Li</i> | |
| ANTI-SUBMARINE HELICOPTERS' COOPERATIVE SUBMARINE DETECTING FAN SECTOR MODELING | 1497 |
| <i>Xinshu Li, Zhongyang Mao, Yang Zhang, Weibo Li</i> | |
| DOUBLE-INCIDENT ANGLE METHOD FOR THE IMPROVEMENT OF ANGLE SCAN SURFACE PLASMON RESONANCE SENSOR | 1503 |
| <i>Wei Luo, Zelin Hu, Jiarui Liu, Fenglong Sun, Hualong Li, Lei Chen, Huiyi Gao, Miao Li</i> | |
| SURFACE EFFECT ON MECHANICAL PROPERTIES AND ATOMIC MOBILITY OF ULTRATHIN POLYSTYRENE FILMS USING MOLECULAR DYNAMICS SIMULATIONS | 1508 |
| <i>Fan Yang, Zheng Zhong</i> | |
| IDENTIFYING MISCLASSIFIED BUG REPORTS | 1514 |
| <i>Suo Hu, Zhou Zou</i> | |
| ANALYSIS OF INFORMATION SECURITY RISK AND APPLICATION SECURITY OF CLOUD COMPUTING FROM THE ASPECT OF HIERARCHICAL PROTECTION | 1521 |
| <i>Li Zhao</i> | |
| APPLICATION OF VINE COPULA IN MULTI-MARKET DEPENDENCE RESEARCH | 1527 |
| <i>Xiaohe She, Jingfang Wu</i> | |
| DEFINITION OF THE CONNOTATION OF WATER RIGHT IN THE TRANSITIONAL PERIOD AND RESEARCH ON ITS MANAGEMENT PATTERNS- BASED ON THE REFORM EXPERIENCES OF SEVERAL COUNTRIES | 1534 |
| <i>Fang Liu, Wang Miao</i> | |
| RESEARCH ON ALGORITHM OF CIVIL AIRCRAFT NETWORK COMMUNICATION ROUTING ACROSS THE OCEAN ENVIRONMENT | 1541 |
| <i>Dehai Yang, Yuqin Yao</i> | |

| | |
|---|------|
| ADAPTIVE SYNCHRONIZATION IN MULTI-COUPLED DYNAMIC NETWORK | 1545 |
| <i>Ting Zhang</i> | |
| FORWARD LOOKING INFRARED TARGET MATCHING ALGORITHM BASED ON DEPTH LEARNING AND MATRIX DOUBLE TRANSFORMATION | 1551 |
| <i>Qiongfeng Wu, Yong ZHU, Yi Chen, Zhiqiang Zhang</i> | |
| THE INFLUENCE OF DIFFERENT TESTING TIME FOR STONE RADIOACTIVE DETECTION RESULTS | 1557 |
| <i>Xiang Yu</i> | |
| ANALYSIS OF THE MECHANICAL PROPERTIES AND ELECTRICAL CONDUCTIVITY OF ALUMINUM WIRE BY THE DISSOLUTION TEMPERATURE | 1563 |
| <i>Xiang Yu</i> | |
| NUMERICAL SIMULATION AND ANALYSIS OF SEWAGE HEAT UTILIZATION WITH SEWAGE HEAT EXCHANGER | 1569 |
| <i>Changming Zhou, Hong Kan</i> | |
| DESIGN OF LOW POWER TRIANGLE TYPE STAIR CLEANING MACHINE | 1573 |
| <i>Haiyan Xin, Chengxiang Li, Peng Peng</i> | |
| DESIGN OF INTELLIGENT HOME CONTROL SYSTEM BASED ON GSM | 1579 |
| <i>Lizhen Zhang, Haiyan Xin, Yulin Chen, Haoxia Huang</i> | |
| DATABASE DESIGN ON ROTATING CLASSROOM TEACHING RESOURCES SYSTEM BASED ON DB2 | 1584 |
| <i>Zuoyou Yin</i> | |
| DESIGN ON COLLEGE ENGLISH VOCABULARY LEARNING SYSTEM BASED ON MOBILE PHONE APP | 1589 |
| <i>Dan Zhao</i> | |
| PULSE DETECTION SYSTEM BASED ON PHOTOELECTRIC VOLUMETRIC SENSOR | 1594 |
| <i>Qingru Lu, Haiyan Xin, Hui Huang, Quanliang Yao</i> | |
| CONSTRUCTION ON COMPUTER LABORATORY BASED ON CLOUD COMPUTING | 1598 |
| <i>Jingjing Liang</i> | |
| IMPLEMENTATION OF AFTER-SALES SERVICE SYSTEM BASED ON SSI IMPROVED FRAMEWORK | 1603 |
| <i>Yongchang Ren, Yongzhe Ma, Hang Wang</i> | |
| APPLICATION OF PARALLEL COMPUTING TO OBTAIN ALL COMPLEX ROOTS OF A HIGH ORDER EQUATION | 1608 |
| <i>Liying Wang, Zhanlin Yu</i> | |
| DEVELOPMENT ON AUTONOMOUS SPOKEN ENGLISH LEARNING APP PLATFORM | 1613 |
| <i>Yanjia Xu</i> | |
| DATABASE DESIGN ON EXPERIMENTAL EQUIPMENT ACCOUNTING TREATMENT SYSTEM BASED ON ORACLE | 1618 |
| <i>Yanmei Wang, Linchuang Zhang</i> | |
| DEVELOPMENT ON TEACHING MATERIAL MANAGEMENT SYSTEM BASED ON SSI FRAMEWORK | 1623 |
| <i>Zhe Li, Hui Ma</i> | |
| DESIGN ON SPORTS MEETING GROUPING AND LANE SYSTEM | 1628 |
| <i>Jian Pan</i> | |
| VELOCITY CHARACTERISTICS OF VERTICAL BUOYANT JET FROM A SQUARE ORIFICE IN STATIC AMBIENT | 1632 |
| <i>Shaobo Wang, Xiaoli Sun, Yufeng Xie</i> | |
| STUDY ON TRANSIENT PERFORMANCE TESTING METHOD OF ELECTRONIC CURRENT TRANSFORMER IN SMART SUBSTATION | 1638 |
| <i>Xiao-ming Wang, Wei Zhou, Ke Zhou, Ming-po Li, Bin Wang</i> | |
| PREPARATION AND CHARACTERIZATION OF NANOMATERIAL OF LAAL₁₁O₁₈₈ PRODUCED BY CHEMICAL CO-PRECIPIATION METHOD | 1644 |
| <i>Tonghui Zhao, Zhen Zhou, Tianling Lv, Rui Zhao</i> | |
| PRINCIPLES AND WIRELESS COMMUNICATION TECHNIQUE OF OFDM | 1650 |
| <i>Mengze Yuan</i> | |
| SIGNAL PROCESSING MECHANISM FOR POWER GRID MONITORING BASED ON EVENT RULE | 1653 |
| <i>Qiang Song, Hong Gong, Jiaqiao Zhao, Liqiu Yan, Shugang Yao, Jingfeng Zhang</i> | |
| SIGNAL LOCAL RECONSTRUCTION ALGORITHM BASED ON COMPRESSED SENSING AND UNSUPERVISED LEARNING | 1657 |
| <i>Lingli Tan</i> | |
| CONSTRUCTION OF MULTI TIER DISTRIBUTED COMPUTING DATA MINING SYSTEM IN CLOUD COMPUTING ENVIRONMENT | 1664 |
| <i>Wendong Xia, Yuanfeng Liu, Deli Chen</i> | |
| DESIGN OF BANK CREDIT CARD CUSTOMER RELATIONSHIP MANAGEMENT SYSTEM BASED ON MVC MODE | 1668 |
| <i>Jianmei Ma</i> | |
| LOCAL BIFURCATION OF STEADY STATE SOLUTIONS FOR A CLASS OF REACTION-DIFFUSION SYSTEM | 1673 |
| <i>Yupei Zhang, Xibing He</i> | |
| NONLINEAR BIHARMONIC EQUATION WITH HARDY-SOBOLEV POTENTIAL | 1678 |
| <i>Xibing He, Yupei Zhang</i> | |
| SOLUTION DESIGN OF RESEARCH FOR EMERGENCY MANAGEMENT | 1685 |
| <i>Xia Peng, Rui Li</i> | |

| | |
|--|------|
| HIGHWAY MIDDLE PILE COORDINATE AUTOMATIC CALCULATION BASED ON COMBINE OF EXCEL AND EXCEL VBA PROGRAM | 1690 |
| <i>Guo-wen Che</i> | |
| DISCUSSION OF THE EFFECT OF POSITIONAL TOLERANCE ON OTHER TOLERANCES | 1697 |
| <i>Shu-ping Lv</i> | |
| HYBRID FLOW-SHOP SCHEDULING PROBLEM BASED ON GENETIC ALGORITHM | 1703 |
| <i>Rong Zhang</i> | |
| DESIGN OF A ROTARY SPROUT VERTICAL CULTIVATION DEVICE | 1707 |
| <i>Yi Guo, Jiwu Ma</i> | |
| DESIGN OF A SPROUT ULTRASONIC AEROPONIC CULTIVATION DEVICE | 1712 |
| <i>Yi Guo, Jiwu Ma</i> | |
| A CASE OF VBA APPLICATION IN TRANSACTION PROCESSING | 1717 |
| <i>Guoliang Dong, Guofang Wu, Chaozhou Chen</i> | |
| VERTICAL SUNSHINE TEMPERATURE GRADIENT LOADS COMPARATIVE STUDY | 1721 |
| <i>Guang-xing Zhu</i> | |
| SURFACE SETTLEMENT MATHEMATICAL MODEL RESEARCH IN THE PROCESS OF SHIELD TUNNEL | 1727 |
| <i>Gui-hua Wang</i> | |
| SOLVE VRPPD WITH IMPROVED BACTERIA OPTIMIZATION ALGORITHM | 1732 |
| <i>Bo Li, Chen Guo, Tao Ning, Yingqi Wei</i> | |
| EMPIRICAL RESEARCH ON ASSESSING INDEX SYSTEM FOR INTEGRATION OF INFORMATION AND INDUSTRIALIZATION OF LOGISTICS EQUIPMENT MANUFACTURING INDUSTRY | 1737 |
| <i>Houhong Feng, Ning Tao, Zhangze Yu</i> | |
| DESIGN OF A SIMULATED EXPERIMENTAL APPARATUS OF ELECTRIC AUTOMOBILE | 1742 |
| <i>Wenzi Gong</i> | |
| A POLYNOMIALLY SOLVABLE CASE OF SCHEDULING MULTIPROCESSOR TASKS IN A MULTI-MACHINE ENVIRONMENT | 1746 |
| <i>Xiao Xin, Min Mou, Guohua Mu</i> | |
| DESIGN METHOD OF POLYMER PARAMETERS OF ASP FLOODING IN SECOND-TYPE LAYERS | 1750 |
| <i>GuangJie Zhao</i> | |
| STUDY ON PREDICTION METHOD OF POLYMER FLOODING WELL FRACTURING EFFECT | 1755 |
| <i>Hong Pang</i> | |
| A LINEAR TIME EXACT ALGORITHM FOR SCHEDULING UNIT-PROCESSING-TIME-JOBS WITH SIZES 1 OR K | 1760 |
| <i>Xiao Xin, Guohua Mu, Min Mou</i> | |
| OPTIMIZED ANALYSIS ON THE WORKING PROCESS OF ENGINE VARIABLE GAS DISTRIBUTION PHASE | 1764 |
| <i>Fengjun Wang</i> | |
| ENERGY AND ANGULAR MOMENTUM CONSERVATION ANALYSIS OF TORNADO | 1770 |
| <i>Binbin Xin</i> | |
| HEAT DISSIPATION ANALYSIS OF BATHTUB BASED ON THERMODYNAMICS | 1774 |
| <i>Binbin Xin</i> | |
| FAULT DIAGNOSIS OF DIESEL ENGINE OIL PUMP BASED ON VIBRATION SIGNAL PROCESSING | 1778 |
| <i>Xia Feng</i> | |
| EFFECTS OF FAT THICKNESS ON HEAT TRANSFER | 1784 |
| <i>Xiang Cheng</i> | |
| REVIEW OF SOLAR THERMAL POWER GENERATION TECHNOLOGY | 1788 |
| <i>Xiang Cheng</i> | |
| THE MACHINING PROCESS PLANNING OF THE GOVERNOR SPEED CONTROL LEVER | 1792 |
| <i>Dan Wang</i> | |
| DEVELOPMENT OF A DESIGN SYSTEM FOR THE SPROUT TIDE-TYPE IRRIGATION DEVICE | 1797 |
| <i>Yi Guo</i> | |
| BRIEF PROBE ON APPLICATION OF COMPASS NAVIGATION SATELLITE SYSTEM IN THE FIELDS OF SEA, LAND AND AIR | 1803 |
| <i>Yu Zhao</i> | |
| EVALUATION OF BEIJING AIR QUALITY BASED ON THE JUDGMENT MATRIX | 1808 |
| <i>Ming Cheng</i> | |
| SIMULATION ANALYSIS OF AUTOMOBILE ABS BASED ON ARTIFICIAL NEURAL NETWORK | 1812 |
| <i>Banglu Chen</i> | |
| POOR THIN RESERVOIR HORIZONTAL WELL PATTERN OPTIMIZATION DESIGN | 1818 |
| <i>Zhihui Xiang</i> | |
| DESIGN OF THE INTELLIGENT MONITORING SYSTEM FOR UNIVERSITY DORMITORY | 1823 |
| <i>Zhihong Xiao, Bowen Ren</i> | |
| EXPERIMENT ON THE ELECTROFORMING NICO-SIC ALLOY | 1827 |
| <i>Xiaohu Zheng, Xiaohong Zhu</i> | |
| Author Index | |