

2nd International Conference on Artificial Intelligence and Industrial Engineering (AIIE2016)

Advances in Intelligent Systems Research Volume 133

Beijing, China
20 – 21 November 2016

Editors:

R.E. Sehiemy
M.B.I. Reaz
C.J. Lee

ISBN: 978-1-5108-3536-8

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© (2016) by Atlantis Press
All rights reserved.
<http://www.atlantis-press.com/php/pub.php?publication=aiie-16>

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

MACHINE LEARNING, MODELS AND ALGORITHM

| | |
|---|----|
| KEY RESEARCH OF PRE-PROCESSING ON MONGOLIAN-CHINESE NEURAL MACHINE TRANSLATION | 1 |
| <i>Jian Du, Hongxu Hou, Jing Wu, Zhipeng Shen, Jinting Li, Hongbin Wang</i> | |
| THE RESEARCH OF GRADE PREDICTION MODEL BASED ON IMPROVED K-MEANS ALGORITHM | 7 |
| <i>Yongguang Zhang, Hua Wang, Hongyang Li</i> | |
| THE MODIFIED MODEL OF Q-LEARNING SEARCH STRATEGY BASED ON LDA-DBN | 11 |
| <i>Shihao Zhu, Guangfeng Zhang, Dongfan Zhao</i> | |
| A GENERAL CONCEPTUAL MODEL OF RECOMMENDATION BASED ON MULTI-AGENT APPROACH | 15 |
| <i>Xunhui Zhang, Tao Wang, Gang Yin, Xinjun Mao, Huaimin Wang</i> | |
| ROBUST MODEL FOR MULTIMODAL LOCATION OF THE HAZMAT UNDER UNCERTAINTY | 20 |
| <i>Liping Liu, Zipeng Yi</i> | |
| THE CORRELATION ANALYSIS OF CLEAN ENERGY OUTPUT BASED ON NONPARAMETRIC KERNEL DENSITY ESTIMATION PROBABILITY MODELS | 24 |
| <i>Xiaolin Qin, Yonggang Li, Chao Shen, Zengqiang Zhang, Xuyao Zeng</i> | |
| PENALTY-PSO ALGORITHM FOR SEQUENCING MIXED MODEL ASSEMBLY LINE | 29 |
| <i>Chenglong Lu, Bo Zhu, Beibei Liu, Yuwei Wan</i> | |
| A COMPARATIVE ANALYSIS TOWARD TWO FAMOUS SMART-TOURISM BY INTEGRATED DYNAMIC-PROGRAMMING & PROJECT APPRAISAL MODEL | 33 |
| <i>Tianhang Huang, Nan Zhang</i> | |
| A PROBABILITY PPV MODEL FOR SOCIAL NETWORK INFLUENCE MAXIMIZATION PROBLEM | 37 |
| <i>Yunjia Ge, Dong Wang</i> | |
| TECHNOLOGY OF EXPLORATORY OLAP BASED ON THE INTEGRAL ANALYTICAL MODEL | 43 |
| <i>Anna Korobko</i> | |
| DEVELOPMENT OF A UNIFIED MODEL OF DATA REPRESENTATION FOR CROSS-SYSTEM INTERACTION | 48 |
| <i>Tatiana Penkova, Anna Korobko, Artem Belorusov</i> | |
| ADAPTIVE MODEL OF DATA EXCHANGE FOR CROSS-SYSTEM INTERACTION | 52 |
| <i>Tatiana Penkova, Anna Korobko, Artem Belorusov</i> | |
| STUDY ON THE DISTRIBUTION MODEL OF SUPERMARKET CHAIN BASED ON AHP | 56 |
| <i>Caixia Chen, Chun Shi</i> | |
| VALIDATION OF DYNAMIC SIMULATION MODELS ON UNCERTAINTY | 60 |
| <i>Xiaojun Guo, Shaojing Su</i> | |
| THE CLASSIFICATION MODEL OF CUSTOMER GROUPS BASED ON GRADER | 64 |
| <i>Tao Xi, Lijing Wang</i> | |
| SIMULATION-BASED PREDICTION MODEL OF THE AUTO-BODY MULTI-STAGE FORMING PROCESS | 69 |
| <i>Dong-Guk Han, Dong-Won Jung</i> | |
| AN IMPROVED K-MEANS CLUSTERING ALGORITHM BASED ON MELIORATED INITIAL CENTRE | 73 |
| <i>Xiang Li, Zhenwei Wei, Lingling Li</i> | |
| DESIGN OF SLIDING ROPE PROTECTION ALGORITHM FOR MINE HOIST IN IRON MINE | 77 |
| <i>Jinyang Xia, Yanping Wang, Linlin Shao</i> | |
| AN IMPROVED POSSIBILISTIC FUZZY ENTROPY CLUSTERING BASED ON ARTIFICIAL BEE COLONY ALGORITHM | 80 |
| <i>Baofeng Guo, Mingyan Jiang</i> | |
| A TRANSMISSION PROBABILITY CONTROL ALGORITHM BASED ON COMPETING NODE ESTIMATION IN MANET | 84 |
| <i>Shentao Wang, Xiaoli Liu, Jingwen Sui, Shengze Qiang, Rui Li, Junqiang He</i> | |

| | |
|---|-----|
| A DYNAMIC SLOT ALLOCATION ALGORITHM IN HIGH-BAND RADIO NETWORKS | 87 |
| <i>Shentao Wang, Xiaoli Liu, Bin Liu, Shibiao He, Shengze Qiang, Rui Li, Junqiang He</i> | |
| PARALLEL ALGORITHM FOR IDENTIFYING OVERLAPPING COMMUNITIES FROM LOCAL EXTENSION | 90 |
| <i>Hua Long, Baoan Li</i> | |
| THE METHOD OF STRUCTURAL DAMAGE IDENTIFICATION BY ACO ALGORITHM AND WAVELET THEORY | 94 |
| <i>Deqing Guan, Jun Tang, Tao He</i> | |
| DAMAGE IDENTIFICATION OF FRAME STRUCTURE BY WAVELET-GENETIC ALGORITHM | 98 |
| <i>Deqing Guan, Tao He, Jun Tang</i> | |
| DETECTION OF APPLICATION-LAYER DDOS BY CLUSTERING ALGORITHM | 102 |
| <i>Chuyu She, Wushao Wen, Zaihua Lin, Kesong Zheng</i> | |
| A FAST DEPTH INTRA MODE SELECTION ALGORITHM | 105 |
| <i>Jieling Fan, Qiang Li, Jianlin Song</i> | |
| A DEFINITION OF STRUCTURE HOLE AND ALGORITHMS | 110 |
| <i>Tianji Zhao</i> | |
| OPTIMIZED TF-IDF ALGORITHM WITH THE ADAPTIVE WEIGHT OF POSITION OF WORD | 114 |
| <i>Jie Chen, Cai Chen, Yi Liang</i> | |
| RESEARCH OF REACTIVE POWER PLANNING OPTIMIZATION BASED ON IMPROVED ADAPTIVE GENETIC ALGORITHM FOR WIND POWER PLANT | 118 |
| <i>Shijie Liu</i> | |
| RESEARCH ON OPTIMIZATION OF GENERATOR GRID-RELATED PARAMETERS BASED ON DOUBLE-STRANDED QUANTUM GENETIC ALGORITHM | 122 |
| <i>Yan Xu, Lixin Fan, Yunqian Li, Zhong Chen</i> | |
| AN EFFICIENT CHARACTER SEGMENTATION ALGORITHM FOR OFFLINE HANDWRITTEN UIGHUR SCRIPTS BASED ON GRAPHEME ANALYSIS | 129 |
| <i>Yamei Xu, Panpan Du</i> | |
| RESEARCH ON VEHICLE DETECTION AND TRACKING ALGORITHM BASED ON THE METHODS OF FRAME DIFFERENCE AND ADAPTIVE BACKGROUND SUBTRACTION DIFFERENCE | 134 |
| <i>Yiqin Cao, Xiao Yun, Tao Zhong, Xiaosheng Huang</i> | |
| BALANCED COD-CLARANS: A CONSTRAINED CLUSTERING ALGORITHM TO OPTIMIZE LOGISTICS DISTRIBUTION NETWORK | 141 |
| <i>Tong Zhang, Dong Wang, Haonan Chen</i> | |

INTELLIGENT CONTROL, MECHATRONICS AND ROBOTICS

| | |
|--|-----|
| REMEMBER-ALL BASED FRONTIER ALLOCATION FOR MULTI-ROBOT COVERAGE IN UNKNOWN ENVIRONMENTS | 146 |
| <i>Sushil Parti, Dan Wu</i> | |
| USING THE IEEE 802.11 FAMILY OF STANDARDS FOR COMMUNICATION BETWEEN ROBOTIC SYSTEMS | 153 |
| <i>Andrei Vladyko, Alexander Paramonov, Ruslan Kirichek, Andrey Koucheryavy</i> | |
| ARTIFICIAL INTELLIGENCE APPLICATIONS IN POWER SYSTEM | 158 |
| <i>Xiaoyue Zhao, Xinyan Zhang</i> | |
| A SYNCHRONOUS AND CLOSED-LOOP ARCHITECTURE OF BCI-BASED REHABILITATION SYSTEM FOR STROKE WITH ROBOT AND VIRTUAL REALITY | 162 |
| <i>Chuanqi Tan, Fuchun Sun, Wenchang Zhang, Shaobo Liu</i> | |
| DESIGN OF A SMART HOME REMOTE MONITORING SYSTEM BASED ON C++ AND ZIGBEE | 166 |
| <i>Xuewen Shi, Qinglan Wang, Guangdeng Zong, Tongdui Zhang</i> | |
| TEMPERATURE CONTROL SYSTEM BASED ON SCM | 170 |
| <i>Yuxin Lei</i> | |
| DEVELOPING A FIRE MONITORING AND CONTROL SYSTEM BASED ON IOT | 174 |
| <i>Yi Li, Jianjun Yi, Xiaoming Zhu, Zhuoran Wang, Fangwen Xu</i> | |
| AN ELECTRIC POWER SYSTEM PROTOCOL CONVERSION METHOD BASED ON EMBEDDED PLATFORM | 179 |
| <i>Jiang Zhu, Chong Xie, Tao Yan</i> | |

| | |
|---|------------|
| ENERGY AWARE SCHEDULING ALGORITHM FOR VEHICLE NETWORKING APPLICATIONS IN CLOUD COMPUTING PLATFORM..... | 183 |
| <i>Zheng Xiao, Bo Wang</i> | |
| A PRELIMINARY STUDY FOR EXPLORING HIGH-SPEED TRAIN DRIVER FATIGUE USING EYE-GAZE CUE..... | 187 |
| <i>Ronghui Yan, Cheng Wu, Yiming Wang</i> | |

ARTIFICIAL NEURAL NETWORKS AND APPLICATION

| | |
|--|------------|
| PATH-PLANNING OF A CERTAIN UAV USING NEURAL-NETWORK METHOD..... | 191 |
| <i>Jie Li, Li Li</i> | |
| OPTIMIZATION METHOD OF WAVELET NEURAL NETWORK FOR SUSPENSION BRIDGE DAMAGE IDENTIFICATION..... | 194 |
| <i>Deqing Guan, Jie Li, Jun Chen</i> | |
| ROI POOLING BASED FAST MULTI-DOMAIN CONVOLUTIONAL NEURAL NETWORKS FOR VISUAL TRACKING..... | 198 |
| <i>Yuanyuan Qin, Shiyong He, Yong Zhao, Yuanzhi Gong</i> | |
| COMBINING FFT AND SPECTRAL-POOLING FOR EFFICIENT CONVOLUTION NEURAL NETWORK MODEL..... | 203 |
| <i>Zelong Wang, Qiang Lan, Dafei Huang, Mei Wen</i> | |
| THE STUDY OF RSSI IN WIRELESS SENSOR NETWORKS..... | 207 |
| <i>Jungang Zheng, Yue Liu, Xufeng Fan, Feng Li</i> | |
| A GENERAL GENDER INFERENCE METHOD BASED ON WEB..... | 210 |
| <i>Hong Yang, Yali Yuan</i> | |
| RESEARCH OF PREDICTION SCHEME BASED ON ADAPTIVE PARTICLE SWARM WAVELET NEURAL NETWORK MODEL..... | 214 |
| <i>Fuxing Yang, Qi Zhang, Ning Li, Zhongliang Deng</i> | |
| THE BEGINNING AND EVOLUTION OF CONSCIOUSNESS..... | 219 |
| <i>H. J. Cai, Tianqi Cai, Wenwei Zhang, Kai Wang</i> | |
| CASCADED HALLUCINATION-CLASSIFICATION DEEP NETWORK FOR LOW-RESOLUTION FACE RECOGNITION IN THE WILD..... | 223 |
| <i>Zheyu Zhang, Peter Cheung</i> | |
| CYLINDRICAL MEDICINE BOTTLE'S CHARACTER RECOGNITION OF AUTOMOTIVE DISPENSING MACHINE..... | 227 |
| <i>Mingde Gong, Xianming Zhang, Tao Ni</i> | |
| A REVIEW OF VISUAL TRACKING WITH DEEP LEARNING..... | 231 |
| <i>Xiaoyu Feng, Wei Mei, Dashuai Hu</i> | |
| IKNN-SVM: A HYBRID INCREMENTAL ALGORITHM FOR IMAGE CLASSIFICATION..... | 235 |
| <i>Huimin Che, Bo Ding, Huaimin Wang, Ben Hu, Huifang Che</i> | |
| DIGITAL WATERMARKING TECHNOLOGY OF HOLOGRAPHIC IMAGE BASED ON S-FFT METHOD..... | 240 |
| <i>Li Wang, Fuping Liu, Zirui Fu, Yukun Wang, Zhipeng Lu</i> | |
| A HUMAN IDENTITY RECOGNITION SYSTEM BASED ON KINECT SKELETAL TRACKING AND ANN CLASSIFIER..... | 244 |
| <i>Xianhui Zeng, Jinwen Deng, Mujun Liu, Yue Wang, Xuejun Zhang</i> | |
| APPLICATION OF DESIGN PATTERNS IN DEVELOPMENT OF REUSABLE GIS SYMBOL LIBRARY..... | 248 |
| <i>Xiaojian Li, Jianxun Chen</i> | |
| AN EFFICIENT METHOD FOR AIR QUALITY EVALUATION VIA ANN-BASED IMAGE RECOGNITION..... | 253 |
| <i>Xiaoguang Chen, Yaru Li, Dongyue Li</i> | |
| AN APPROACH FOR DETECTING HUMAN POSTURE BY USING DEPTH IMAGE..... | 257 |
| <i>Xianshan Li, Maoyuan Sun, Xiuxiu Fang</i> | |
| CHANGE DETECTION OF REMOTE SENSING IMAGE BASED ON DEEP NEURAL NETWORKS..... | 262 |
| <i>Yan Chu, Guo Cao, Hassan Hayat</i> | |
| RESEARCH ON IMAGE ACQUISITION AND RECOGNITION FOR STORED GRAIN PESTS..... | 268 |
| <i>Defa Wang, Huiling Zhou, Haiying Yang, Yufeng Shen, Yang Cao, Huiyi Zhao</i> | |
| A SIMPLE AND FAST ALGORITHM FOR IMAGE CODING BASED ON SPIHT..... | 273 |
| <i>Yiqun Zhang, Peijie Lin, Lijun Wu, Shuying Cheng</i> | |

| | |
|---|-----|
| IMAGE RETRIEVAL ALGORITHM BASED ON CONVOLUTIONAL NEURAL NETWORK | 278 |
| <i>Hailong Liu, Baoan Li, Xueqiang Lv, Yue Huang</i> | |
| AN IMPROVED K - MODE ALGORITHM FOR FACIAL EXPRESSION IMAGE CLUSTERING | 282 |
| <i>Xibin Jia, Jianming Yuan, Yujie Xiao</i> | |
| IMPLEMENTATION OF VIRTUAL VISUALIZATION IN MOUNTAIN SCENIC SPOTS BASED ON SPATIAL INTEGRATION TECHNOLOGY | 286 |
| <i>Sisi Lv, Weiquan Zhao, Wei Li, Weici Su</i> | |

DATA MINING AND ANALYSIS

| | |
|--|-----|
| USING THE PATTERN FUNCTION OF ANGULAR MOMENTUM IMPROVE THE DIRECTIVITY OF BINARY ANTENNA ARRAY | 291 |
| <i>Jiangmei Tang, Bin Yao, Qinrong Zheng</i> | |
| AN ADAPTIVE ANT COLONY ALGORITHM FOR CLASSIFICATION RULE MINING | 295 |
| <i>Xiaomeng Zhang, Wensheng Sun</i> | |
| RESEARCH SEMI-SUPERVISED LEARNING VIA KERNEL FUNCTION METHOD | 300 |
| <i>Jianfeng Liu, Jia Lv</i> | |
| TEXT SIMILARITY BASED ON SEMANTIC ANALYSIS | 303 |
| <i>Junli Wang, Qing Zhou, Guobao Sun</i> | |
| RESEARCH ON PATENT DOCUMENT CLASSIFICATION BASED ON DEEP LEARNING | 308 |
| <i>Bing Xia, Baoan Li, Xueqiang Lv</i> | |
| HI-RF: INCREMENTAL LEARNING RANDOM FOREST FOR LARGE-SCALE MULTI-CLASS DATA CLASSIFICATION | 312 |
| <i>Tingting Xie, Changjian Wang, Yuxing Peng</i> | |
| OLP SCHEME ON BACKUP LOG AND HBASE | 322 |
| <i>Chao Feng, Baoan Li</i> | |
| HIGH-SPEED DATA LONG-LINE TRANSMISSION MODELING AND EVALUATION | 326 |
| <i>Xiao Li, Bowei Zhang, Shaowei Li, Chaojie Wang, Fanling Kong, Zhichao Xue</i> | |
| SEGMENTATION STUDY OF AGED GAIT BASED ON FFT | 330 |
| <i>Li Zhu, Yuchuan Wu, Shuangbao Ma, Shengfeng Qi</i> | |
| INVESTIGATING SEMANTIC RELATIONSHIP BETWEEN THE SCENE AND THE SOUND WITHIN THE SCENE BY DYNAMIC CAUSAL MODELING | 334 |
| <i>Xiaojing Wang, Junhai Xu</i> | |
| AN EMPIRICAL STUDY ON ENERGY DISAGGREGATION VIA DEEP LEARNING | 338 |
| <i>Wan He, Ying Chai</i> | |
| THE APPLICATION OF KNN AND SVM IN THE DECODING OF FMRI DATA | 343 |
| <i>Fangyuan Ma, Junhai Xu</i> | |
| RESEARCH ON GOMBRICH'S ACADEMIC AFFINITIVE COMMUNITY BASED ON DATA MINING | 346 |
| <i>Jing Ye</i> | |
| RETHINKING THE TRADITIONAL "FAITHFULNESS" AFTER DECONSTRUCTING CENTEREDNESS | 351 |
| <i>Chunhua Shen</i> | |

SOFTWARE PROCESS AND INTELLIGENT INFORMATION SYSTEMS

| | |
|--|-----|
| RECOGNITION OF STRATUM LITHOLOGY OF SEISMIC FACIES BASED ON DEEP BELIEF NETWORK | 354 |
| <i>Guohe Li, Yang Zheng, Ying Li, Weijiang Wu, Yunfeng Hong, Xiaoming Zhou</i> | |
| DETECTING SYSTEM OF COLLECTING AND EXHAUSTION OF CHEMICAL GAS IN TANK CAR | 358 |
| <i>Qing Li, Ligang Luo, Yeqing Sun, Xinhua Xia, Ge Shi, Muda Jin, Renyuan Tong, Zhipeng Zhao</i> | |
| AGENT-BASED EIGHT WHEEL-LEGGED HYBRID WHEELCHAIR CONTROL SYSTEM | 362 |
| <i>Dongxing Cao, Shanshan Liu, Chao Wang, Minfei Li</i> | |
| THE DESIGN AND REALIZATION OF UNIVERSITY E-VOTING SYSTEM | 366 |
| <i>Haibo Zhang, Shuyuan Shang, Wenfeng Zhai, Chunyan Zhang, Ying Zhang</i> | |
| DESIGN AND IMPLEMENTATION OF AN INTELLIGENT ENTER-PRISE EMAIL FILTER BASED ON SERVICE PLUGINS | 371 |
| <i>Jing Zhang, Jianmin Yao, Ling Zhang, Qihua Zhang</i> | |

| | |
|--|------------|
| WATER SAVING IRRIGATION MONITORING NETWORK LOCALIZATION ALGORITHM BASED ON RSSI RANGING | 377 |
| <i>Bo Chang, Xinrong Zhang, Baoguo Xv</i> | |
| RESEARCH ON MEAT PRODUCT TRACEABILITY SYSTEM BASED ON TWO DIMENSIONAL CODE..... | 382 |
| <i>Yanbai Wang, Lu Tan</i> | |
| RESEARCH AND SYSTEM DESIGN OF TRACEABILITY SYSTEM FOR FOOD SAFETY..... | 385 |
| <i>Yanbai Wang, Lu Tan</i> | |
| ONLINE MONITORING OF THREE DIMENSIONAL LEDGE PROFILE OF ALUMINUM ELECTROLYTIC CELL | 388 |
| <i>Zhengguang Xu, Liling Song, Mingsheng Ju, Yu Xue</i> | |
| RESEARCH OF ONTOLOGY BASED BATTLEFIELD SCENARIO GENERATION SYSTEMS..... | 393 |
| <i>Dongsu Jeong, Dohyun Kim, Yoonho Seo</i> | |
| AN AUTOMATIC ANTI-ATTACK SCHEME FOR MYSQL DATABASE..... | 397 |
| <i>Qiao Sun, Lanmei Fu, Weihao Qiu, Jiasong Sun</i> | |
| CREATION OF UYGHUR OFF-LINE HANDWRITTEN SIGNATURE DATABASE..... | 401 |
| <i>Ahat Yimin, Zulpiya Gheni, Mahpirat, Yunus Aysa, Kurban Ubul</i> | |
| IMPROVING FAULT LOCALIZATION THROUGH FAULT PROPAGATION ANALYSIS..... | 405 |
| <i>Zhimin Fang, Danni Li, Shifei Chen, Rong Chen</i> | |
| THE TECHNIQUE TO DESIGN SHARING MAINTENANCE RESOURCES AMONG MAINTENANCE MODULES..... | 410 |
| <i>Bo Zhang, Ying Xu, Fusheng Liu, Shouhua Chen, Ying Shen</i> | |
| RESEARCH ON THE CONTINUOUS USE INTENTION OF GOVERNMENT PORTALS BASED ON GROUNDED THEORY | 415 |
| <i>Zhiwei Tang, Jing Tan, Zepeng Gong, Xiao Han, Seth Kwame Sakyi Arthur</i> | |
| TRUSTED SOFTWARE BEHAVIOR MONITORING MODEL BASED ON AGENT..... | 420 |
| <i>Caimao Li, Shaofan Chen, Hanwei Wu, Jing Chen</i> | |
| AN IMPROVED SCHEME OF PRIVACY PRESERVING BASED ON LAGRANGE INTERPOLATION IN CLOUD STORAGE | 424 |
| <i>Yu Jin, Yadan Wang</i> | |
| IMPROVED COLLISION CRYPTANALYSIS OF AUTHENTICATED CIPHER MORUS..... | 429 |
| <i>Tairong Shi, Jie Guan, Junzhi Li, Pei Zhang</i> | |
| SECURE QR CODE SCHEME BASED ON VISUAL CRYPTOGRAPHY..... | 433 |
| <i>Xiaohe Cao, Liuping Feng, Peng Cao, Jianhua Hu</i> | |
| STANDARD GREY POTENTIAL AND ITS APPLICATION IN GREY TARGET DECISION..... | 437 |
| <i>Aiqing Ruan, Xiaoyong Yin, Qiu Chen, Yinao Wang</i> | |

APPLIED MECHANICS AND INDUSTRIAL ENGINEERING

| | |
|--|------------|
| DYNAMIC CHARACTERISTIC SIMULATION ANALYSIS OF HIGH SPEED MILLING MOTORIZED SPINDLE..... | 442 |
| <i>Fei Zhang, Jian Wei</i> | |
| RESEARCH ON SENSOR-LESS VECTOR CONTROL SYSTEM OF PMSM BASED ON MRAS..... | 445 |
| <i>Shengrui Zhang, Haiyan Zhang</i> | |
| BEARING FAULT DIAGNOSIS BASED ON IFA-ELM..... | 449 |
| <i>Qunxian Chen, Zekun Zhou</i> | |
| INTEGRATED DESIGN METHOD RESEARCH ON PERFORMANCE AND RELIABILITY OF SHIP STEAM TURBINE..... | 453 |
| <i>Xiaojie Zhang, Sheng Hong, Longlong Sun, Hao Yuan, Xiaorui Zhang</i> | |
| NC MACHINING OF SPECIAL GEOMETRY PART | 459 |
| <i>Jingui Wan</i> | |
| ELECTRONIC BALANCE APPLICATION IN PM2.5 ~ PM10 DETECTION | 462 |
| <i>Zhongqi Xiong, Peiying Yu, Yi Su</i> | |
| RESEARCH ON INFLUENCE OF MILLING PARAMETERS ON MACHINING DEFORMATION OF RECTANGULAR THIN- WALLED PARTS..... | 466 |
| <i>Jing Li, Ping Xi, Yang Jiao</i> | |
| AN IMPROVED "BLACK BOX" MEASURE FOR EVALUATING COLLISION RESISTANCE..... | 470 |
| <i>Qi Wu</i> | |
| DESIGN OF A NEW TYPE THRUST MEASURING SYSTEM FOR MICRO-TURBOJET ENGINE..... | 474 |
| <i>Hongji Zhu, Farong Du, Shuai Zhao, Zheng Xu, Zhan Lv</i> | |

| | |
|---|------------|
| INFLUENCE OF STEEL FIBER CONTENT OF RPC FLEXURAL FATIGUE LIFE | 478 |
| <i>Mao Lin, Yanfeng Tian, Xiaoqing Yu, Gongli Hu</i> | |
| UNIFIED DESCRIPTION OF THE ONBOARD EQUIPMENT MODEL ON THE BASIS OF THE "SIMULATION MODEL PORTABILITY" STANDARD | 481 |
| <i>Ludmila Nozhenkova, Olga Isaeva, Evgeniy Gruzhenko, Andrey Koldyrev, Aleksey Markov, Artem Belorusov, Rodion Vogorovskiy</i> | |
| DESIGN OF INTERFACE PROGRAMS FOR POWER QUALITY STANDARD DEVICE | 485 |
| <i>Lei Shao, Xiang Jing, Zhong Chen</i> | |
| EXPERIMENTAL STUDY AND APPLICATION ANALYSIS OF CHEMICAL CURING SOIL | 488 |
| <i>Mao Lin, Yanfeng Tian, Xiaoqing Yu, Gongli Hu</i> | |
| STRUCTURAL PHASE TRANSITIONS OF LOW-CARBON ALLOY STEELS DURING ELECTROLYTIC-PLASMA PROCESSING | 491 |
| <i>K. K. Kombaev, E. Kozha, D. U. Smagulov, B. Sadeh</i> | |
| DESIGN OF THE COMPLEX SUPER HIGH-RISE ARCHITECTURAL STRUCTURE OF FUYOU TWIN TOWERS IN BINZHOU CITY | 495 |
| <i>Xuping Zhu, Yuanqing Wang, Lin Yu</i> | |
| THE 750KV TRANSFORMER CONDITION ASSESSMENT BASED ON IMPROVED GREY- TARGET | 499 |
| <i>Xi He, Ruiping Zhang, Haiying Dong</i> | |

AI APPLICATIONS IN EDUCATION AND MANAGEMENT

| | |
|--|------------|
| GAMING AS EDUCATIONAL TECHNOLOGY AND THE EVALUATION OF GAMING RESULTS-THE EXPERIMENT OF SWEDEN GAME | 503 |
| <i>Masashi Kawaguchi, Takeshi Kougo, Hideyuki Kanematsu, Norio Baba</i> | |
| A NOVEL TEACHER-STUDENT NETWORK FOR SENTIMENT CLASSIFICATION | 507 |
| <i>Huajie Chen, Eric Ke Wang, Feng Li, Wenli Yu</i> | |
| BEHAVIOR AND INTENTION IN MOOCS RESEARCH | 513 |
| <i>Bing Wu, Chenyan Zhang</i> | |
| APPLICATION OF ARTIFICIAL INTELLIGENCE TO CROSS-SCREEN MARKETING: A CASE STUDY OF AI TECHNOLOGY COMPANY | 517 |
| <i>Te Fu Chen, Tsai-Fong Tan, Chieh-Heng Ko</i> | |
| ARTIFICIAL INTELLIGENCE APPLICATIONS OF HAZARDOUS MITIGATION FOR TRANSPORT AIRCRAFT IN SEVERE ATMOSPHERIC TURBULENCE | 520 |
| <i>Ray C. Chang</i> | |
| A USER INTEREST RECOMMENDATION BASED ON COLLABORATIVE FILTERING | 524 |
| <i>Wenqi Wu, Jianfang Wang, Randong Liu, Zhenpeng Gu, Yongli Liu</i> | |
| ENTERPRISE SOCIAL MEDIA RESEARCH | 529 |
| <i>Bing Wu, Chenyan Zhang</i> | |
| A MULTI-SERVICE HEALTHCARE NETWORK DESIGN WITH PATIENTS' CHOICE TO EXCHANGE BETWEEN SERVICES | 533 |
| <i>Maryam Radman, Kouros Eshghi</i> | |
| APPLICATION OF RANDOM FOREST TO THE PROTOTYPING OF THE 3D GARMENT | 542 |
| <i>Shuaijun Wang, Ye Yuan, Hongli Dun</i> | |
| RESEARCH AND PRACTICE OF TOBACCO INDUSTRIAL COMPANIES' SALES FORECAST BASED ON ARMA MODEL, SEASONAL FLUCTUATION AND POLICY FACTOR | 546 |
| <i>Qiao Shi, Yong Cen, Liping Xu, Lina Zhang</i> | |
| Author Index | |