

5th International Symposium on Knowledge Acquisition and Modeling (KAM 2015)

Advances in Intelligent Systems Research Volume 80

London, United Kingdom
27 – 28 June 2015

Editor:

W. Deng

ISBN: 978-1-5108-1348-9

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© (2015) by Atlantis Press
All rights reserved.
<http://www.atlantis-press.com/php/pub.php?publication=kam-15>

Printed by Curran Associates, Inc. (2015)

For permission requests, please contact Atlantis Press
at the address below.

Atlantis Press
29 avenue Laumière
75019 Paris
France

contact@atlantispress.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: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

KNOWLEDGE ENGINEERING AND COMPUTER SCIENCE

DESIGN OF REMOTE STRUCTURAL MONITORING SYSTEM BASED ON LABVIEW AND LINUX	1
<i>Jing Yubing, Zhao Hui</i>	
RESEARCH ON MULTI-PERIOD STOCHASTIC INVENTORY MODEL OF TOBACCO COMMERCIAL ENTERPRISE	4
<i>Huang Dongbing, Zhang Dandan</i>	
AN APPLICATION OF VIRTUAL ASSESSMENT AND ENHANCED TESTING METHODS IN DEVELOPING OF AERIAL PRESSURE SENSOR SYSTEM	7
<i>Li Weilin, Li Zhiqiang, Li Xiaoxiao, Qin Sha</i>	
A NOVEL IDENTIFICATION METHOD OF TWO PHASE FLOW BASED ON LDA FEATURE EXTRACTION AND GRNN IN ERT SYSTEM	12
<i>Zhang Yanjun</i>	
DIFFERENCE ANALYSIS BETWEEN SAFETY MANAGEMENT SYSTEM AND AIRWORTHINESS MANAGEMENT SYSTEM IN CIVIL AIRCRAFT DESIGN AND MANUFACTURE ORGANIZATION	15
<i>Li Sheng, He Pei, Lu Yao, Li Jing</i>	
FREQUENCY DETERMINATION OF BEAMS COUPLED BY A DOUBLE SPRING-MASS SYSTEM USING TRANSFER MATRIX METHOD OF LINEAR MULTIBODY SYSTEMS	21
<i>Abbas Laith K., Zhou Qinbo, Rui Xiaoting</i>	
PARAMETER IDENTIFICATION OF WIND POWER SYSTEM LOW FREQUENCY OSCILLATION BASED ON MATRIX PENCIL ALGORITHM AND STABILIZATION DIAGRAM	25
<i>Xie Guoqiang, Pan Benren, Xiong Lixia, Zou Jin, Yu Kansheng</i>	
SYSTEM INTEGRATION OF PLM AND ERP BASED ON CLOUD COMPUTING	29
<i>Tang Guochun</i>	
AUTOMOBILE GENERAL EQUIPMENT DEPARTMENT WORKSHOP WAREHOUSING SYSTEM SIMULATION STUDY	33
<i>Pi Daijun, Li Qingsong</i>	
TECHNICAL RESEARCH OF CRANE RELIABILITY CONTROL BASED ON NEURAL NETWORK	37
<i>Yu Janli, Zhou Ruitang, Wu Zhifei</i>	
SELF-RELATED PROCESS RESIDUAL CONTROL CHART BASED ON NEURAL NETWORK	41
<i>Yu Janli, Han Yang, Miao Manxiang, Huang Hongqi</i>	
MEASUREMENT OF SOME PARAMETER IN WIND TUNNEL EXPERIMENT BASED ON ZIGBEE	44
<i>Yuan Zhiqiang</i>	
AN INTELLIGENT ALGORITHM OF BI-LEVEL PROGRAMMING MODEL FOR THREE-STAGE SUPPLY CHAIN	47
<i>Wang Rui, Zhao Shuang, Rao Renqiao</i>	
A METHOD FOR OCEAN TURBULENCE EFFECTIVENESS DETECTION AND INTELLIGENT PROCESSING BASED ON PSEUDO DISSIPATION RATE	51
<i>Song Dalei, Yan Qizhi, Wang Shuxin, Yang Hua, Zhu Yuchao</i>	
SIMULATION STUDY ON MECHANICAL PROPERTIES OF THREE-PHASE ASYNCHRONOUS MOTOR BASED ON MIXED PROGRAMMING	55
<i>Ma Tengfei, Wu Yanxiang, Lv You</i>	
STUDY ON THE TECHNICAL CHARACTERISTICS AND DEVELOPMENT DIRECTION OF 4G COMMUNICATION	57
<i>Liang Dehou, Zhang Yang</i>	
THE TRANSFORMATION OF SCHOOL AUDITORIUM SOUND REINFORCEMENT SYSTEM	60
<i>Zhang Yang</i>	
A REUSABLE DRIVING ENGINE FOR COMPLEX CONTROL SYSTEMS BASED ON EMBEDDED TCP/IP	63
<i>Zhang Zhichun, Xiao Jingxin, Xu Wen, Zhao Zhenpen, Tang Shengquan, Bu Jian</i>	

IMPLEMENTATION OF THE MODEL FOR IDENTIFYING AND REFERRING HARDWARE IN COMPLEX SIMULATION SYSTEMS	67
<i>Zhang Zhichun, Xiao Jingxin, He Yun, Zhao Zhenpen, Tang Shengquan, Bu Jian</i>	
LIGHTWEIGHT RFID PRIVACY PROTOCOL BASED ON UNIVERSAL HASH FUNCTION	71
<i>Gao Shu-Jing, Zhang Rui-Quan</i>	
THE DYNAMIC RATE-LIMITING FILTERING BASED ON PREPROCESSING SENSOR DATA.....	74
<i>Tang Chao, Wan Zhou</i>	
A SHIP MISSION RELIABILITY MODELING METHOD BASED ON GTST IN SCHEMATIC DESIGN PHASE.....	76
<i>Yang Jianjun, Li Fang</i>	
CONFIGURATION ANALYSIS OF A VARIABLE-TOPOLOGY MOBILE ROBOT	82
<i>Tian Hai-Bo, Li Ai-Min</i>	
APPLICATION OF MULTIMEDIA AND NETWORK IN SPECIALIZED ENGLISH FOR AUTOMATION	86
<i>Wang Xiyan, Wang Tianhao</i>	
TEACHING STRATEGIES OF SPECIALIZED ENGLISH FOR AUTOMATION ASSISTED BY MULTIMEDIA AND NETWORK	89
<i>Wang Xiyan, Wang Tianhao</i>	
A STUDY ON SIMULATION OF SINGLE SAILING TRAINING SYSTEM	92
<i>Chang Xiaofeng, Luan Xin, Hou Guojia</i>	
ENTROPY EVALUATION OF INDUSTRIAL UPGRADING OF MINING AREA	96
<i>Ji Shuailing, Zhang Rui</i>	
RESEARCH OF A WEIGHTED MULTI-LINK LOAD BALANCE NETWORK MODEL BASED ON P2P	100
<i>Li Jiao, Liang Gongqian, Liu Tianshi</i>	
DYNAMIC MODELLING AND ANALYSIS OF PERFORMANCE FOR THE ELECTROMAGNETIC-DRIVEN SPHERICAL ROBOT	103
<i>Sang Shengju</i>	
THE STUDY OF QUANTUM PLATFORM IN UNDERWATER GLIDER	107
<i>Qi Shengbo, He Zengchuan, Chai Ying, Yao Lele, Zhang Chenglun, Song Dalei</i>	
SIMULATION ANALYSIS OF SUPPLY CHAIN SYSTEM UNDER EMERGENCIES BASED ON MULTI-AGENT MODEL	111
<i>Li Qianying, Wang Jirong, Song Dawei, Li Jun</i>	
MULTIPARTY BIDIRECTIONAL QUANTUM SECURE COMMUNICATION BASED ON CLOSED QUBIT TRANSMISSION	116
<i>Yin Xunru</i>	
RESEARCH ON TWICE SINGLE-DIRECTION NEGOTIATION PROCESS ON SINGLE-LAYER USER-DATA SWITCHING PLATFORM ARCHITECTURE	120
<i>Guo Yangyong, Yu Wei, Hu Jun</i>	
DESIGN ON TESTER OF FRUIT SURFACE FRICTION	123
<i>Yang Lei, Song Xin, Li Yancong, Shan Huiyong</i>	
A LOW ORDER NONCONFORMING MIXED FINITE ELEMENT SCHEME FOR NONLINEAR INTEGRO DIFFERENTIAL EQUATIONS OF PSEUDO-HYPERBOLIC TYPE	125
<i>Li Xianzhi, Zhang Kaiguang, Meng Hongling</i>	
A NOVEL K-COMBINATION FIRST-FIT ALGORITHM FOR THREE-DIMENSIONAL KNAPSACK PACKING PROBLEM	128
<i>Huang Xiaoyu, Qi Mingyao, Zhang Ying, Zhao Shulin</i>	
THE RESEARCH AND APPLICATION OF INTELLIGENT BROADCAST SYSTEM OF COAL MINE	132
<i>Guo Xiucan, Lu Xiaomin</i>	
APPLICATION AND RESEARCH OF SVM IN COAL MINE FAN CONDITION MONITORING.....	136
<i>Guo Xiucan, Wang Kaixuan</i>	
A SIMULATION TEST BASED ON IMPROVED SSL PROTOCOL	140
<i>Huang Xueqin, Qiang Geng</i>	
THE REAL-TIME ACQUISITION TERMINAL SYSTEM BASED ON MULTI-MACHINE PARALLEL	144
<i>Qiao Xinxiao</i>	
THE IT AUDIT OBJECTIVE RESEARCH BASED ON THE INFORMATION SYSTEM SUCCESS MODEL UNDER THE BIG DATA ENVIRONMENT	147
<i>Li Tingliao, Chen Lianghua</i>	

COMPUTER-ASSISTED LANGUAGE LEARNING AND THE IMPROVEMENT OF COMMUNICATIVE COMPETENCE	151
<i>He Qibin</i>	
PATH PLANNING OF ROBOTIC FISH BASED ON FUZZY CONTROL	155
<i>Li Xin, Deng Yansong</i>	
TIBETAN RECOGNITION SYSTEM BASED ON THE IMPROVED EXTRACTION ALGORITHM OF COMPLEXITY INDEX FEATURE	159
<i>Mai Zhiyuan, Xiang Wei</i>	
MODELING OF NONLINEAR DYNAMICS OF DRILL STRINGS IN A SUPERSONIC AIR FLOW	163
<i>Khajiyeva L. A., Kudaibergenov A. K.</i>	
OBJECT TRACKING USING MEANSHIFT ALGORITHM COMBINED WITH KALMAN FILTER ON ROBOTIC FISH	168
<i>Li Xin, Xiang Wei</i>	
ANALYSIS ON ENERGY SAVING AND CONSUMPTION REDUCING OF WIRELESS SENSOR NETWORK	173
<i>Yang Xiaoqing</i>	
VIRTUAL DESIGN OF THE HYDRAULIC MANIFOLD BLOCK	177
<i>Guo Yinsai, Zhang Yi, Zeng Xiangfu, Zhang Mengyi</i>	
STUDY ON INFORMATION DEMANDS IN HEURISTIC TEACHING FOR LEARNERS	180
<i>Luo Qi</i>	

MATERIALS SCIENCE AND MANUFACTURING ENGINEERING

STUDY ON DESIGN OF CARBON-CREDIT'S COST ACCOUNTING SYSTEM FOR MANUFACTURING ENTERPRISES PROBLEMS	184
<i>Liu Chengzhi, Liu Bolun, Yang Ziang</i>	
FINITE ELEMENT CALCULATION AND EXPERIMENTAL VERIFICATION OF THE FIBERS MECHANICAL PROPERTIES IN THE REVERSING PROCESS	189
<i>Han Chenchen, Xue Wenliang, Cheng Longdi</i>	
SURROGATE ASSISTED TEACHING LEARNING BASED OPTIMISATION FOR PROCESS DESIGN OF A NON-CIRCULAR DRAWING SEQUENCE	193
<i>N. Pholdee, S. Bureerat, H. M. Baek, Y.-T. Im</i>	
APPLICATION OF KALMAN FILTER IN THE PREDICTION OF STOCK PRICE	197
<i>Xu Yan, Zhang Guosheng</i>	
FINITE ELEMENT SIMULATION OF GRINDING PERFORMANCE AND GRAIN SHAPES IN GRINDING SUPERALLOY-INCONEL	199
<i>Ma Lianjie, Yu Aibing, Wang Jia, Li Chen, Wang Fengwen</i>	
ROBUST OPTIMIZATION ANALYSIS ON GREEN MANUFACTURING PROCESS EVALUATION BASED ON ORDINAL INTERVAL PREFERENCE INFORMATION	202
<i>Lin Yaqin, Guo Chunxiang</i>	
THE ANALYSIS OF ELASTIC-PLASTIC MECHANICS OF BUS BODY CONSTRUCTION IN CONDITIONS OF ROLLOVER BY MEANS OF SIMULATION AND REAL TEST	206
<i>Orlov Lev, Rogov Peter, Tumasov Anton, Vashurin Andrey</i>	
EVALUATION RESEARCH ON MILITARY LOGISTICS DISTRIBUTION CENTER BASED ON SVM	210
<i>Yang Fan, Zhao Zhanbiao, Jiang Tianyuan, Dong Yucai</i>	
NUMERICAL STUDY ON COMBUSTION AND EMISSIONS PERFORMANCE OF DME-METHANOL ENGINE	213
<i>Zhang Pengchao, Zhang Cuiping, Yao Xiaobo, Guo Dongqing, Xiao Shuai</i>	
RESEARCH ON THE THINKING AND METHODS OF EXHIBITION PROP DESIGN FROM THE PERSPECTIVE OF SEMIOLOGY	217
<i>Qian Gong</i>	
DESIGN PRINCIPLE OF THE EXHIBITION PROJECT BASED ON USER RESEARCH OF PLANETARIUM	220
<i>Liu Xinxiong, Li Wensi, Li Xuan, Cao Wenqi</i>	
STUDY ON THE DEFORMATION OF PRE-STRESSED CENTRE DIAPHRAGM OF PRESSURE SENSOR	223
<i>He Shenzi, Hu Guoqing, Zhou Yonghong, Wang Jianling, Zou Chong, Alam Sm Jahangir</i>	

COMPENSATION FOR HARMONIC FLUX AND CURRENT OF PERMANENT MAGNET SYNCHRONOUS MOTOR BY INJECTED HARMONIC VOLTAGE	226
<i>Lu Jun, Yang Jianguo, Liang Steven Y., Ren Ruirong</i>	
PREPARATION AND AGGREGATE FORMATION OF O-HYDROXYPROPYL-N-LAUREL ACYL CHITOSAN RAMIFICATION	230
<i>Tan Funeng, Zhang Zhixin, Zhou Yunbo, Sui Weiping</i>	
RESEARCH OF LOESS DYNAMIC SUBSIDENCE UNDER LOCOMOTIVE VIBRATION LOAD OF THE HIGH-SPEED RAILWAY	234
<i>Yang Tao, Wang Jiading, Luo Huilai, Li Qiang</i>	
DESIGN OF PORTABLE EDM MACHINE TOOL	238
<i>Wang Xuetao</i>	
ANALYSIS OF THE NATURAL VIBRATION FREQUENCY OF SCHWEDLER RETICULATED SHELL STRUCTURES BASED ON FINITE ELEMENT SOFTWARE	242
<i>Jiang Mingmei</i>	
DEVELOPMENT AND PROSPECT OF FRICTION SURFACING TECHNOLOGY	244
<i>Li Mingfeng</i>	
A STUDY OF THE PERFORMANCE OF PEMFC HYBRID VEHICLE USING ADVISOR	247
<i>Liang Jingming, Wu Zefeng</i>	
CONTROL INTERFACE DESIGN OF AIRCRAFT COCKPIT BY THE KANSEI ENGINEERING	251
<i>Ma Jinsheng, Sun Yujie</i>	
RESEARCH OF AUTOMATIC INTERPRETATION OF ANALOG GAUGE'S INDICATING DATA	255
<i>Song Jianbo, Zhang Lei</i>	

INFORMATICS, ECONOMICS AND MANAGEMENT ENGINEERING

THE INNOVATION OF THAI SILK FOR DESIGN AND PRODUCTION OF MUSLIM WOMEN DRESSES	259
<i>Jatuphatwarodom Srikanjana, Chonsakorn Sakorn, Sawanaporn Suttita, Chupinijrobkob Suladach, Wongpatham Waraporn, Khumsingha Uraivan, Suksawad Kornnut, Pholam Kittiyaphan, Ruangnarong Chanakarn, Jatuphatwarodom Natawat, Mongkholrattanasit Rattanaphol</i>	
"MIAO SILVER" ANALYSIS OF MARKETING PRODUCT POSITIONING AND QUANTITATIVE ANALYSIS	262
<i>Liu Jingjing, Liu Li</i>	
ENLIGHTENMENT OF BUSINESS IN CHINA LOW-CARBON ECONOMY IN DEVELOPED COUNTRIES IN VARIOUS FIELDS OF APPLICATION AND PRACTICE	266
<i>Jiao Hongli, Wang Juan</i>	
ANALYSIS ON DETERMINING OF THE PURCHASE PRICE IN THE REPURCHASE STAGE OF A BT PROJECT: A CASE OF RAIL TRANSPORTATION PROJECT	270
<i>Zhong Wei, Jiang Teng-Teng</i>	
HOW SOCIAL FACTORS AFFECT THE DESIGN OF NEW URBAN RESIDENCES	274
<i>Xie Ke, Shen Hui</i>	
QUALITY'S IMPACT ON FOOD DEVELOPMENT IN CHINA	277
<i>Xu Yang, Tan Feng, Peng Xinyi, Li Yukun</i>	
EFFECTS OF FOOD TRACEABILITY APPLIED IN FRESH VEGETABLE SUPPLY CHAIN IN CHINA	280
<i>Xu Yang, Tan Feng, Turner Sandra, Cheng Li, Dong Xiang</i>	
BENEFITS AND RISKS OF ADOLESCENT STRENGTH TRAINING	284
<i>Liao Ting, Xu Shaohua</i>	
RANKING AND AGGREGATION OF FACTORS AFFECTING COMPANIES' ATTRACTIVENESS	288
<i>Dikopoulou Zoumpolia, Papageorgiou Elpiniki, Nápoles Gonzalo, Vanhoof Koen</i>	
RESEARCH ON THE PITCH PATTERN OF VOICE VARIATION	293
<i>Zhang Hongbing</i>	
RESEARCH OF ACO IN DECISION-MAKING OF SKILLS AND TACTICS IN BADMINTON	298
<i>Mao Jie</i>	