

International Conference on Cyberspace Technology (CCT 2015)

IET Conference Publications 678

Beijing, China
17 – 18 October 2015

ISBN: 978-1-5108-2187-3

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 the Institution of Engineering and Technology
All rights reserved.

Printed by Curran Associates, Inc. (2016)

For permission requests, please contact the Institution of Engineering and Technology
at the address below.

Institution of Engineering and Technology
P. O. Box 96
Stevenage, Hertfordshire
U.K. SG1 2SD

Phone: 01-441-438-767-328-328
Fax: 01-441-438-767-328-375

www.theiet.org

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

DEFENSE STRATEGY SELECTION BASED ON SIGNALING GAME	1
<i>Zhang Hengwei, Wang Jindong, Yu Dingkun, Han Jihong, Wang Na</i>	
OPERATION MECHANISM OF HYBRID TRANSPORTATION QUEUEING NETWORK WITH EXPONENTIAL QUEUES PROCESS	8
<i>Bing Li, Hua Xuan</i>	
CSFW-SC: A HIGH-DIMENSIONAL CLUSTERING ALGORITHM BASED ON CUCKOO SEARCH	16
<i>Jindong Wang, Jiajing He, Hengwei Zhang, Zhiyong Yu</i>	
A NOVEL OLSR PROTOCOL WITH MOBILITY PREDICTION	23
<i>Jian Liu, Xin Ji, Ci Huang, Xinxin Tan</i>	
A DUAL-LEAD FUSION DETECTION ALGORITHM OF QRS	28
<i>Jian Liu, Xinxin Tan, Ci Huang, Xin Ji</i>	
FLEXIBLE FLOWSHOP SCHEDULING WITH MULTIPROCESSOR TASKS: TWO LAGRANGIAN RELAXATION ALGORITHMS	34
<i>Hua Xuan, Ying Feng, Bing Li</i>	
RESEARCH FOR MODELING NETWORK SECURITY BASED ON ATTACK-DEFENSE GRAPY OF STATE REDUCTION	39
<i>Tao Li, Hengwei Zhang, Jindong Wang, Na Wang</i>	
ACTIVE DEFENSE STRATEGY SELECTION BASED ON STATIC BAYESIAN GAME	44
<i>Hengwei Zhang, Jindong Wang, Dingkun Yu, Jihong Han, Tao Li</i>	
RELIABLE DESIGN OF A PREPOSITIONING NETWORK OF EMERGENCE SUPPLIER UNDER FACILITY DISRUPTION RISKS	51
<i>Wenbing Shui, Lin Xu, Xiaojing Shen, Ming He</i>	
IZ:AN IMPROVED GREEDY ALGORITHM FOR INFLUENCE MAXIMIZATION UNDER THRESHOLD MODEL	57
<i>Junrong Wang, Yue Hu, Xiaozhi Zhang</i>	
SECRECY THROUGHPUT ANALYSIS IN MISOSE NETWORKS WITH CHANNEL FEEDBACK DELAY AND CHANNEL ESTIMATION ERRORS	62
<i>Zhi Lin, Yueming Cai, Lei Wang, Weiwei Yang</i>	
FINDING RUMOR SOURCE IN WEIGHTED SCALE-FREE NETWORKS	67
<i>Xiaozhi Zhang, Yue Hu, Junrong Wang</i>	
NODE IMPORTANCE ANALYSIS CONSIDERING CASCADING FAILURE IN CYBERSPACE	71
<i>Feng Bo, Jiang Da-li, Wang Yi-sheng</i>	
A NOVEL HYBRID CHAOTIC SEQUENCE AND ITS PERFORMANCE ANALYSIS	77
<i>Yanping Zhang, Ruimin Lu</i>	
RESEARCH ON SERVICE TRUST EVALUATION APPROACH UNDER CLOUD COMPUTING ENVIRONMENT	81
<i>Yu Zhi-Yong, Zhang Heng-Wei, Niu Kan, Wang Jin-Dong</i>	
SGCAM-AN COMPREHENSIVE ANALYSIS METHOD FOR INFORMATION RISK ASSESSMENT INDEX SYSTEM	86
<i>Chen Yu, Wang Jin-dong, Wang Kun, Li Tao</i>	
CLOUD RESOURCE SCHEDULING METHOD BASED ON ESTIMATION OF DISTIRBUTION SHUFFLED FROG LEAPING ALGORITHM	91
<i>Niu Kan, Wang Jin-dong, Zhang Heng-wei, Wang Na</i>	
FUZZY SUBSPACE CLUSTERING ALGORITHM BASED ON MODIFIED FIREFLY ALGORITHM	97
<i>He Jia-jing, Zhang Heng-wei, Wang Na, Niu Kan</i>	
BIDIMENSIONAL JOINT DETECTION WITH TIME AND FREQUENCY RELEVANCE IN COGNITIVE RADIOS	103
<i>Fan Zhang, Jinchun Gao, Gang Xie, Yuanan Liu, Shuo Liu</i>	
MULTI-PATH SDN ROUTE SELECTION SUBJECT TO MULTI-CONSTRAINTS	108
<i>Qingfeng Pan, Xianghan Zheng</i>	
A MAC PROTOCOL FOR COMMUNICATION IN DISTRIBUTED CONSTELLATION SELF-ORGANIZING NETWORK	113
<i>Shuo Liu, Jinchun Gao, Gang Xie, Yuanan Liu, Fan Zhang, Ruitan Wu</i>	

END-TO-END SPEECH ENCRYPTION ALGORITHM BASED ON SPEECH SCRAMBLING IN FREQUENCY DOMAIN	118
<i>Yaoyao Chen, Jianhua Hao, Jianbiao Chen, Zibo Zhang</i>	
AN INTEGRATED ILP MODEL FOR ROUTING, MODULATION LEVEL AND SPECTRUM ALLOCATION IN THE NEXT GENERATION DCN.....	123
<i>Xiao Jia, Fan Ning, Shan Yin, Dajiang Wang, Jie Zhang, Shanguo Huang</i>	
A NOVEL VIRTUAL MACHINE CONSOLIDATION MECHANISM IN TWO DIMENSIONS ENVIRONMENT	126
<i>Changming Zhao, Jian Liu</i>	
A RECOMMENDER SYSTEM BASED ON CONTEXTUAL INFORMATION OF CLICK AND PURCHASE DATA TO ITEMS FOR E-COMMERCE.....	131
<i>Duo Lin, Su Jingtao</i>	
PROTECT TIME BASED POLICY CONFLICTS PREVENTION AND RESOLUTION MECHANISM IN SDN	137
<i>J. Zhou</i>	
EFFECT OF TROPOSPHERE DELAY ON MEASUREMENT OF HIGH DYNAMIC RECEIVER	143
<i>Zhang Youke, Song Peng, Qi Jianzhong</i>	
A STUDY ON ANTENNA UPLINK ARRAY FOR DEEP SPACE TT[AMP]C	147
<i>Jin-song Guo, Jia-cai Hong</i>	
RESEARCH ON THE COOPERATION BETWEEN ISP AND CDN.....	152
<i>Zhen-guo Qi, Wei Song, Jian-jun Hou, Fu-hong Lin, Guo-sheng Yang</i>	
MULTI-FEATURE FUSION BASED HUMAN ACTION RECOGNITION ALGORITHM.....	157
<i>Wei Song, Ning-ning Liu, Guosheng Yang, Fu-hong Lin, Pei Yang</i>	
GAIT RECOGNITION BASED ON DWT AND T-SNE	162
<i>Linlin Che, Yinghui Kong</i>	
AN USER SELECTION ALGORITHM FOR THE HETEROGENEOUS NETWORK	166
<i>Han Dongsheng, Hao Conghui, Zhang Hairui, Che Linlin</i>	
RESEARCH ON COMPREHENSIVE PERFORMANCE ASSESSMENT FOR WSN BASED ON ANALYTIC NETWORK PROCESS.....	170
<i>Huale Zhang, Zhixiong Chen</i>	
OLAP QUERY PERFORMANCE TUNING IN SPARK	174
<i>Yanfei Lv, Huihong He, Yasong Zheng, Zhe Liu, Hong Zhang</i>	
FAST PROVISIONING OF VIRTUAL MACHINES IN A DISTRIBUTED CLOUD.....	179
<i>Wenyu Zhang, Daochao Huang, Hong Zhang</i>	
AN SDN-BASED RESOURCE PRE-COMBINATION DISPATCHING STRATEGY IN MILITARY NETWORK.....	184
<i>Ji Qing, Yang Yang, Li Jing, Meng Kun, Ma Huan, Ding Hao</i>	
STUDY ON MULTI-OBJECTIVE PRIORITY SCHEDULING METHOD OF SENSOR NETWORKS.....	190
<i>Junli Liu</i>	
STUDY ON DATA MODEL OF POWER GRID PLANNING EVALUATION BUSINESS	196
<i>Jianlei Feng, Fang Wei, Shiliang Cao, Xiaomeng Shao</i>	
RESEARCH AND APPLICATION OF INDOOR POSITIONING BASED ON UWB.....	200
<i>Guangyuan Zhao, Huijuan Niu</i>	
STUDY ON SECURITY MANAGEMENT MODEL BASED ON TRUSTED AGENT IN MOBILE CLOUD COMPUTING ENVIRONMENT	205
<i>Wang Yan, Liu Qingyun, Cao Xiufeng, Chen Liangchen</i>	
BUILDING AND TEST OF NETWORK SECURITY SITUATIONAL AWARENESS MODEL BASED ON BAYESIAN METHOD [BUILDING].....	209
<i>Zhen Pan, Yongqiang Wu</i>	
RESEARCH ON MULTI-ROBOT FORMATION CONTROLLING METHOD	213
<i>Xiaoqiang Tang, Yuxiang Ji, Fei Gao, Chenzheng Zhao</i>	
DATA MINING AND ITS APPLICATION BASED ON DATA VISUALIZATION	216
<i>Shengfei Wang, Xiaoqiang Tang, Yuxiang Ji, Chenzheng Zhao</i>	
RESEARCH OF THE SECURITY SITUATION VISUAL ANALYSIS FOR MULTIDIMENSIONAL INLAND NAVIGATION BASED ON PARALLEL COORDINATES	221
<i>Liu Qingyun, Gao Shu, Cao Xiufeng, Chen Liangchen</i>	
IMAGE CAPTCHA TECHNOLOGY RESEARCH BASED ON THE MECHANISM OF FINGER-GUESSING GAME	227
<i>Cao Lei</i>	
RESEARCH FOR THE ARITHMETIC OF CLOUD COMPUTING INTRUSION DETECTION	231
<i>Xueting Han, Yuexi Chen</i>	

KEY MANAGEMENT SCHEME FOR BOTTLENECK STEINER TREE BASED CLOUD COMPUTING	235
<i>Xiaoxi Hu, Jianwei An, Ningning Song, Su Jingtao</i>	
A NON-COOPERATIVE GAME MODEL OF INTRUSION DETECTION SYSTEM IN CLOUD COMPUTING	239
<i>Zhi Li, Yanzhu Liu, Sujingtao</i>	
NOVEL SECURITY ARCHITECTURE OF SATELLITE COMMUNICATION NETWORK	243
<i>Jingtao Su, Fuhong Lin, Ningning Song</i>	
STUDY OF DIGITAL WATERMARK BASED ON CHAOS ALGORITHM	247
<i>Wang Zhongqin, Han Lu, Shengsong Yang, Zhan Qiang, Wu Chaoxia</i>	
RESEARCH ON THE RATE MATCHING OF LTE	252
<i>Jingjing Wu, Yanzhu Liu, Ruijing Wang</i>	
RESEARCH ON MIMO SPACE TIME CODING FOR WIRELESS OPTICAL COMMUNICAYION SYSTEM[COMMUNICAYION READ COMMUNICATION]	256
<i>Pengbo Yu, Ruijing Wang, Yanzhu Liu</i>	
PRIVACY-PRESERVING MULTI-KEYWOR RANKED SEARCH OVER ENCRYPTED BIG DATA [KEYWOR READ KEYWORD]	261
<i>Yanzhu Liu, Zhi Li, Wang Guo, Wu Chaoxia</i>	
DESIGN OF MINIATURIZED BROADBAND MINKOWSKI ACTIVE MICROSTRIP ANTENNA	264
<i>Lu Han, Xianhu Luo, Zhongqin Wang, Yuxia Sun, Yan Wang</i>	
STUDY ON GAME THEORY STRATEGY OF GROUNDWATER POLLUTION CONTROL IN BIG DATA	270
<i>Li Zhi, Liu Yanzhu, Sun Yuxia</i>	
CLOUD COMPUTING RISK ASSESSMENT METHOD BASED ON GAME THEORY	274
<i>Yuxia Sun, Zhi Li, Wu Chaoxia</i>	
CLOUD COMPUTING KEY MANAGEMENT MECHANISM FOR CLOUD STORAGE	279
<i>Yan Wang, Zhi Li, Yuxia Sun</i>	
A RISK-ELIMINATION AND WEIGHT-ADJUSTMENT ALGORITHM FOR OPTICAL NETWORKS	283
<i>Jing Zhou, Yueming Lu, Dongbin Wang</i>	
A MULTI-CONTROL CENTER HOUSEHOLD APPLIANCES COORDINATED CONTROL METHOD BASED ON EVENTS AND ACTIONS	286
<i>Jiani Liu, Yueming Lu, Yonghua Li</i>	
BRIEF ANALYSIS ON WEBSITE PERFORMANCE EVALUATION	290
<i>Li Peng, YueMing Lu, Dongbin Wang</i>	
DESIGN AND IMPLEMENTATION OF IOT CENTRALIZED MANAGEMENT MODEL WITH LINKAGE POLICY	294
<i>Shan Yin, Yueming Lu, Yonghua Li</i>	
EXTRACTING POWER METERING AUTOMATION TERMINAL FLOWS FEATURES AND FORECASTING FAULT CLASSIFICATION	299
<i>Shaofeng Wang, Shaocheng Wu, Tao Liu, Fangzhou Liang, Yueming Lu</i>	
DESIGN AND IMPLEMENTATION OF NETWORK ATTACKS DETECTION MODULE	305
<i>Jiefu Gan, Li Peng, Hang Cheng, Yueming Lu</i>	
A SURVEY OF NETWORK TRAFFIC GENERATION	310
<i>Junhui Zhang, Jiqiang Tang, Xu Zhang, Wen Ouyang, Dongbin Wang</i>	
RESEARCH ON OPTIMIZATION OF COMMUNITY MASS DATA STORAGE BASED ON HBASE	316
<i>Jian Guo, Xu Wu</i>	
STUDY OF TEST CLASSIFICATION ALGORITHM BASED ON DOMAIN KNOWLEDGE	320
<i>Yutong Gao, Feifan Song, Xiaqing Xie, Qing Sun, Xu Wu</i>	
AN ATTACK-AWARE MULTICAST ROUTING ALGORITHM BASED ON GAME ARTIFICIAL FISH MODEL IN MULTILAYER AND MULTI-DOMAIN OPTICAL NETWORKS	325
<i>Qiwu Wu, Qian Wang</i>	
AN IMPAIRMENT-AWARE UNICAST ROUTING ALGORITHM BASED ON COLORED GRAPH MODEL IN MULTI-DOMAIN ASON	330
<i>Qiwu Wu</i>	
AN ATTACK IMPAIRMENT-AWARE MULTICAST ROUTING ALGORITHM BASED ON HYPER-DOMAIN GRAPH MODEL IN MULTI-DOMAIN OPTICAL NETWORK	335
<i>Lingzhi Jiang</i>	
AN IMPROVED DV-HOP LOCATION ALGORITHM BASED ON COMPOSITE PARTICLE SWARM OPTIMIZATION	339
<i>Chuan Cheng, Zhiqiang Gao, Lixia Liu, Qiwu Wu</i>	

IMPROVED MOPSO ALGORITHM BASED ON CLOUD MEMBERSHIP	343
<i>Zhiqiang Gao, Li-xia Liu, Chuan Cheng</i>	
A NOVEL VIRTUAL MACHINE ALLOCATION MODEL BASED ON UTILITY MAXIMIZATION IN CLOUD ENVIRONMENT	347
<i>Jie Luo, Zhiming Zhang, Qiwu Wu</i>	
Author Index	