

2014 IEEE International Conference on Computer and Information Technology

(CIT 2014)

**Xi'an, China
11-13 September 2014**

Pages 1-440



**IEEE Catalog Number: CFP14355-POD
ISBN: 978-1-4799-6240-2**

2014 IEEE International Conference on Computer and Information Technology

CIT 2014

Table of Contents

| | |
|--|---------|
| Message from the CIT 2014 General Chairs..... | xviii |
| Message from the CIT 2014 Program Chairs..... | xx |
| Message from the CIT 2014 Steering Chairs..... | xxi |
| Message from the CIT 2014 Workshop/Symposium Chairs..... | xxii |
| CIT 2014 Organizing and Program Committees..... | xxiii |
| Message from the RACIT 2014 Symposium Chairs..... | xxix |
| RACIT 2014 Organizing and Program Committees..... | xxx |
| Message from the DTWSM 2014 Workshop Chairs..... | xxxix |
| DTWSM 2014 Organizing and Program Committees..... | xxxix |
| Messages from the MMN 2014 Workshop Chairs..... | xxxiii |
| MMN 2014 Organizing and Program Committees..... | xxxiv |
| Message from the ESM-WSNs 2014 Workshop Chairs..... | xxxv |
| ESM-WSNs 2014 Organizing and Program Committees..... | xxxvi |
| Message from the ivrIoT 2014 Workshop Chairs..... | xxxvii |
| ivrIoT 2014 Organizing and Program Committees..... | xxxviii |
| Message from the LSNS 2014 Workshop Chairs..... | xxxix |
| LSNS 2014 Organizing and Program Committees..... | xl |
| Keynote Addresses..... | xli |
| Invited Speakers..... | xlvi |

The 14th IEEE International Conference on Computer and Information Technology (CIT 2014)

CIT-01: Wireless Communications (1)

| | |
|---|---|
| Performance Evaluation for Sum Capacity in OFDMA Systems with Proportional Fairness | 1 |
| <i>Su Fong Chien, Ka Kien Lo, Kae Hsiang Kwong, and Heng Siong Lim</i> | |
| An Improved Wi-Fi Indoor Positioning Method via Signal Strength Order Invariance | 3 |
| <i>Jie Zhuang, Jiadong Zhang, Demin Zhou, Hong Pang, and Wei Huang</i> | |

| | |
|---|----|
| Efficient Taguchi Algorithm for Cognitive Radio Spectrum Allocation | 7 |
| <i>Zhuo Qiu, Yongqiang Hei, and Min Li</i> | |
| Net Utility-Oriented Mobility Load Balancing in Self-Optimizing Networks | 14 |
| <i>Chungang Yang, Hongyan Li, and Yingying Dai</i> | |
| Time Routing: A Community Based Routing Protocol for Opportunistic Networks | 20 |
| <i>Xuebin Ma, Zhenchao Ouyang, Jing Bai, and Xin Zhan</i> | |

CIT-02: Wireless Communications (2)

| | |
|--|----|
| Cooperation Strategies by Cournot Game for Partner Selection and Power Control in S-UMTS | 26 |
| <i>Lixi Fu, Di Liu, Yizhou He, Gaofeng Cui, Huaqing Liang, and Weidong Wang</i> | |
| Study of a Target Positioning Algorithm with Data Filtering in Wireless Sensor Networks | 31 |
| <i>Yan Shi, Shengtao Yu, Jing Zhao, Songhua Huang, and Zhaochen Zhang</i> | |
| Pattern-Aware Sequential Monte Carlo Detection for Generalized Space-Time Shift Keying | 36 |
| <i>Jianping Zheng, Juan Tao, Jinfang Dou, and Baoming Bai</i> | |
| Joint Vector Perturbation Precoding for Multiuser MIMO-OFDM Systems | 44 |
| <i>Rui Chen, Changle Li, Bo Su, and Jiandong Li</i> | |
| An Energy-Efficient Power Control Approach for IEEE 802.11n Wireless LANs | 49 |
| <i>Yuan Li, Ke Li, Wenwen Li, Yan Zhang, Min Sheng, and Jianxiang Chu</i> | |

CIT-03: Wireless Communications (3)

| | |
|---|----|
| A Numerical Study of Scheduling Power Efficiency Gain for MIMO-OFDM Networks | 54 |
| <i>Xiangyu Gao and Yuesheng Zhu</i> | |
| Power and Delay-Aware Routing Protocol for Ad Hoc Networks | 59 |
| <i>Salwa Othmen, Aymen Belghith, Faouzi Zarai, Mohammad S. Obaidat, and Lotfi Kamoun</i> | |
| A Scheduling Framework Supporting QoS in Wireless Mesh Network | 65 |
| <i>Ya Gao, Hailin Zhang, Dong Yang, and Xiaofeng Lu</i> | |
| Optimization of Non-convex Cooperative Spectrum Sensing with Modified Artificial Bee Colony Algorithm | 70 |
| <i>Min Li, Yongqiang Hei, and Zhuo Qiu</i> | |
| Performance Evaluation and Optimization of SRVCC Handover Scheme | 76 |
| <i>Tingting Yuan, Zesong Fei, Yuqiao Ren, and Jianyin Zhang</i> | |

CIT-04: Wireless Communications (4)

| | |
|--|----|
| Outage Performance for Two-Way AF Relaying with Asymmetric Data Rate Requirements and Imperfect CSI over Nakagami-m Fading | 82 |
| <i>Qifei Bu, Jianhua Ge, and Yitong Chen</i> | |
| Outage and Diversity Analysis of Cognitive Relay Networks with Direct Link under Interference Constraints over Nakagami-M Fading | 88 |
| <i>Yitong Chen, Jianhua Ge, and Qifei Bu</i> | |
| A Reliable Beaconless Routing Protocol for VANETs | 94 |
| <i>Yun Chen, Changle Li, Xiaolei Han, Mingyu Gao, and Lina Zhu</i> | |

| | |
|---|-----|
| Full-Duplex MIMO Wireless Communication System | 100 |
| <i>Wu Shandan, An Peng, Li Chao, and Yao Mingwu</i> | |
| Avoiding Information Congestion in VANETs: A Congestion Game Approach | 105 |
| <i>Chen Chen, Yajuan Li, Qingqi Pei, and Chen Chen</i> | |

CIT-05: Microwave and Radar (1)

| | |
|---|-----|
| Chaotic Discrete Frequency Coding Waveform Design for MIMO Radar | 111 |
| <i>Dong Shen, Yu Zhou, Xin Liu, and Linrang Zhang</i> | |
| Space-Surface Bistatic Sar Using BeiDou-2 as Illuminator | 118 |
| <i>Weiming Tian, Tian Zhang, Cheng Hu, Xiaopeng Yang, and Tao Zeng</i> | |
| Radar Signal Parameter Estimation with Sparse Bayesian Representation Based on Zoom-Dictionary | 123 |
| <i>Danlei Xu, Lan Du, and Hongwei Liu</i> | |
| Study of Multistatic Radar Against False Targets Jamming Using Spatial Scattering Properties | 129 |
| <i>Shanshan Zhao, Linrang Zhang, Yu Zhou, and Nan Liu</i> | |

CIT-06: Microwave and Radar (2)

| | |
|---|-----|
| Design and Simulation of Elliptic Aperture Array with Low Side Lobes on Airplane | 134 |
| <i>Jirong Zhou, Xunwang Zhao, Yu Zhang, and Shuang Zhang</i> | |
| UV Coverage Optimization with Simulated Annealing | 138 |
| <i>Huan Zhou, Haitao Li, and Guangliang Dong</i> | |
| SAR Image Despeckling Based on the Nonlocally Centralized Sparse Representation Model | 143 |
| <i>Chenglong Wang, Guanghui Zhao, Guangming Shi, and Huan Li</i> | |
| Radar Emitter Recognition in Airborne RWR/ESM Based on Improved K Nearest Neighbor Algorithm | 148 |
| <i>Wang Ruijia and Wang Xing</i> | |

CIT-07: Pattern Recognition, Data Mining, and Artificial Intelligence (1)

| | |
|--|-----|
| Efficient Personalized Recommendation of Mobile Web Content Using an EM-Based Clustering Method | 152 |
| <i>Ming He, Alvin Chin, Enhong Chen, and Jilei Tian</i> | |
| Mining Periodic Patterns from Nested Event Logs | 160 |
| <i>Janusz R. Getta, Marcin Zimniak, and Wolfgang Benn</i> | |
| SAR Sea Ice Image Segmentation Using Watershed with Intensity-Based Region Merging | 168 |
| <i>Tohulope Bamidele Ijtona, Jinchang Ren, and Phil Byongjun Hwang</i> | |
| Feature Extraction and Pattern Recognition for Human Motion by a Deep Sparse Autoencoder | 173 |
| <i>Hailong Liu and Tadahihiro Taniguchi</i> | |

CIT-08: Pattern Recognition, Data Mining, and Artificial Intelligence (2)

| | |
|---|-----|
| Human Action Recognition Using Compact Global Descriptors Derived from 2DPCA-2DLDA | 182 |
| <i>Yangyang Wang, Yibo Li, and Xiaofei Ji</i> | |
| Real-Time Moving Object Detection from Airborne Videos with Relative Distance Change Measure | 187 |
| <i>Xiaosong Lan, Shuxiao Li, and Hongxing Chang</i> | |
| Road Detection Based on Off-Line and On-Line Learning | 193 |
| <i>Qi Xie, Meiping Shi, Hao Fu, and Tao Wu</i> | |
| Task Specific Top-Down Visual Attention Based on Local Pattern Analysis and Histogram Backprojection for Fast Object Localization | 198 |
| <i>Yiping Shen, Shuxiao Li, Chengfei Zhu, and Hongxing Chang</i> | |

CIT-09: Computer Science (1)

| | |
|---|-----|
| Exploration of a Heterogeneous Concentrated-Sparse On-Chip Interconnect for Energy Efficient Multicore Architecture | 204 |
| <i>Thomas Canhao Xu, Ville Leppänen, and Martti Forsell</i> | |
| Assimilating Cleaning Operations with Flash-Level Parallelism for NAND Flash-Based Devices | 212 |
| <i>Ronghui Wang, Zhiguang Chen, Nong Xiao, Minxuan Zhang, and Weihua Dong</i> | |
| Simple Octree Solution for Multi-resolution LiDAR Processing and Visualisation | 220 |
| <i>Yu You, Lixin Fan, Kimmo Roimela, and Ville-Veikko Mattila</i> | |
| Illustrating Software Modifiability—Capturing Cohesion and Coupling in a Force-Optimized Graph | 226 |
| <i>Johannes Holvitie and Ville Leppänen</i> | |
| An Analytic Hierarchy Process Algorithm for Cloud Based Wi-Fi Offloading | 234 |
| <i>Xingyu Liu, Peng Zhang, Weixue Gong, and Zheng Yan</i> | |

CIT-10: Computer Science (2)

| | |
|--|-----|
| Performance Prediction Model in Heterogeneous MapReduce Environments | 240 |
| <i>Yuanquan Fan, Weiguo Wu, Yunlong Xu, Yangjie Cao, Qian Li, Jinhua Cui, and Zhangfeng Duan</i> | |
| Customized Core Layout: A Case Study on Dual-Core Dynamic Binary Translation System | 246 |
| <i>Fan Xu, Li Shen, Zhiying Wang, Hui Guo, Bo Su, and Wei Chen</i> | |
| Contract-Based Generic Programming Mechanism for Dynamic Service Orchestration | 252 |
| <i>Wuping Xie, Jinyun Xue, and Dongming Jiang</i> | |
| A CRI Based Vertical Handoff Algorithm in Heterogeneous Networks | 258 |
| <i>Mingdi Hu, Wujun Yang, Kun Liu, and Siming Cong</i> | |

CIT-11: Reliability, Security, Privacy, and Trust (1)

| | |
|---|-----|
| Capacity-Equivocation Region Bounds for Degraded Broadcast Channel with Action-Dependent States | 263 |
| <i>Xinxing Yin, Yan Zhu, Xiao Chen, Liang Pang, and Zhi Xue</i> | |
| A Novel Technique for Ring Oscillator Based PUFs to Enroll Stable Challenge Response Pairs | 270 |
| <i>Chaohui Du and Guoqiang Bai</i> | |
| LRMAPC: A Lightweight RFID Mutual Authentication Protocol with Cache in the Reader for IoT | 276 |
| <i>Kai Fan, Chen Liang, Hui Li, and Yintang Yang</i> | |
| New Ciphertext-Policy Attribute-Based Encryption with Efficient Revocation | 281 |
| <i>Longhui Zu, Zhenhua Liu, and Juanjuan Li</i> | |
| Spatially Aware Malware Infection Modeling Framework | 288 |
| <i>Aapo Kalliola and Tuomas Aura</i> | |

CIT-12: Reliability, Security, Privacy, and Trust (2)

| | |
|---|-----|
| A Soft Decision Scheme against Intermittent SSDF Attack in Cooperative Spectrum Sensing | 293 |
| <i>Jingyu Feng, Yuqing Zhang, and Guangyue Lu</i> | |
| Generic Codes Based Traitor Tracing and Revoking Scheme from Attribute-Based Encryption | 299 |
| <i>Xingwen Zhao, Gaofei Zhao, and Hui Li</i> | |
| DIAS: Automated Online Analysis for Android Applications | 307 |
| <i>Juanru Li, Yuanyuan Zhang, Wenbo Yang, Junliang Shu, and Dawu Gu</i> | |
| On Reusable Projective Garbling Schemes | 315 |
| <i>Tommi Meskanen, Valteri Niemi, and Noora Nieminen</i> | |
| Research on Node Trusted Degree Based Security Routing Technology | 323 |
| <i>Hongquan Liang and Wei Wu</i> | |

CIT-13: Mobile Multimedia Communications

| | |
|---|-----|
| Belief Propagation Based Compressed Video Streaming in Wireless Multimedia Sensor Networks | 327 |
| <i>Fang Tian, Haixiao Liu, Bin Song, and Guangliang Ren</i> | |
| Multidimensional QoE Assessment of Multi-view Video and Audio (MVV-A) IP Multicast Transmission Methods | 332 |
| <i>Kazunori Sako and Toshiro Nunome</i> | |
| A Method to Evaluate Quality of Real Time Video Streaming in Radio Access Network | 340 |
| <i>Liang Chen, Xiaolin Deng, Yongmei Qi, Salah Addin Mohammed, Zesong Fei, and Jianyin Zhang</i> | |
| Toward Designing Efficient Application to Identify Objects for Visually Impaired | 345 |
| <i>Hessah Almotiry, Hind Abahussain, Lama Alhammad, Masheal Alshehri, Reem Aldosari, and Sara Alkathiri</i> | |
| A QoE-Driven Resource Allocation Strategy for OFDM Multiuser-Multiservice System | 351 |
| <i>Xiaolin Deng, Qiang Gao, Salah Addin Mohammed, Liang Chen, Feiwang, and Zesong Fei</i> | |

CIT-14: Information Technology

| | |
|--|-----|
| Quasi-Cyclic LDPC Codes Based on the Improved Combining Method | 356 |
| <i>Yuan-Hua Liu, Mei-Ling Zhang, and Xin-Liang Niu</i> | |
| A Bayesian Framework of Information Theoretic Metrics for Anonymity | 359 |
| <i>Han-Ru Pei, Zhi-Jian Wang, and Yu Wang</i> | |
| Design and Evaluation of Virtual Channel-Based Optical-Electrical Interface for Optical Network-on-Chip | 365 |
| <i>Weiwei Fu, Mingmin Yuan, Tianzhou Chen, and Minghui Wu</i> | |
| POND: A Novel Protocol for Network Coding Based on Hybrid Cryptographic Scheme | 373 |
| <i>Chengqiang Huang, Atsuko Miyaji, Longhai Li, and Shangmei Xu</i> | |
| Efficiency Priority Schedule Mechanism with Network Coding in Wireless Networks | 381 |
| <i>Rui Zhang, Guoliang Ding, Quan Qian, and Bofeng Zhang</i> | |

CIT-15: Information Technology and IT for Biomedicine

| | |
|---|-----|
| Transport Route Planning for Mobile Tour Applications | 387 |
| <i>Shou-Chih Lo, Fu-Chiang Huang, and Chien-Chung Wang</i> | |
| Quality Models of e-Government Online Services Towards a Local Focus: Towards a Local Focus | 393 |
| <i>Filipe Sá, Álvaro Rocha, and Manuel Pérez Cota</i> | |
| HOTDOL: HTML Obfuscation with Text Distribution to Overlapping Layers | 399 |
| <i>Sungjae Han, Minsoo Ryu, Jaehyuk Cha, and Byung-Uk Choi</i> | |
| Efficient Grouping Reservation Method for Fast Tag Identification in Passive RFID System | 405 |
| <i>Wang Honggang, Lu Guangyue, Yao Mingwu, and Pei Changxing</i> | |
| Network Analysis and Experimental Validation of the Five Shu Points Model of Traditional Oriental Medicine | 410 |
| <i>Seonghui An, SeungHeui Ryu, Min-Jung Kim, Sang-Min Lee, and Dohoon Lee</i> | |

CIT-16: Signal Processing (1)

| | |
|---|-----|
| Flexible Nonlinear Companding Transform for Reducing PAPR of Multi-carrier Signals | 416 |
| <i>Shenghua Zhai</i> | |
| Interference Truncation for Compute-and-Forward Relaying in Multiple Access Channels | 420 |
| <i>Zhongyuan Zhao, Mugen Peng, Zheng Zhou, and Zhao Wang</i> | |
| BER Analysis for Controller Area Network Impaired by the Impulse Noise in Cyber-Physical Systems | 425 |
| <i>Bo Shen, Xingshe Zhou, and Ru Wang</i> | |
| Automatic Modulation Recognition of Digital Signals Using CWT Based on Optimal Scales | 430 |
| <i>Yuanyuan Lv, Yuanan Liu, Fang Liu, Jinchun Gao, Kaiming Liu, and Gang Xie</i> | |

CIT-17: Signal Processing (2)

| | |
|---|-----|
| Correlation Noise Estimation for Wyner-Ziv Video Transmission over Wireless Network | 435 |
| <i>Zhenhua Tang, Xiangyan Liang, Tuanfa Qin, and Kan Chang</i> | |
| Motion Estimation in Measurement Domain for Compressed Video Sensing | 441 |
| <i>Jie Guo, Bin Song, Haixiao Liu, and Hao Qin</i> | |
| Signal Generation Techniques Based on Arbitrary Sample Rate Conversion | 446 |
| <i>Wang Lijun and Zhao Yun</i> | |

CIT-18: Software Engineering and Applications

| | |
|---|-----|
| Realizing Quality Attributes of Service-Based Business Processes: A Model-Driven Approach | 450 |
| <i>Fabricio De Siqueira Teles, Fernando Antonio Aires Lins, and Nelson Souto Rosa</i> | |
| Tool Support for Planning Global Software Development Projects | 458 |
| <i>Sriharsha Vathsavayi, Outi Sievi-Korte, and Kari Systä</i> | |
| Architecting Cloud Workflow: Theory and Practice | 466 |
| <i>Yong Zhao, Youfu Li, Ioan Raicu, Shiyong Lu, and Xuan Zhang</i> | |
| An Investigation Into Internet Crowdsourcing for Enterprise Software Development | 474 |
| <i>Josh Trow, Lu Liu, and Zhiyuan Li</i> | |

CIT-19: Applications, Business, and Social

| | |
|---|-----|
| Analysis on Stock Market Volatility with Collective Human Behaviors in Online Message Board | 482 |
| <i>Yun-Jung Lee, Hwan-Gue Cho, and Gyun Woo</i> | |
| Hierarchical Modeling and Analysis of Social Roles for Collective Decision-Making Support | 490 |
| <i>Bo Wu, Xiaokang Zhou, Qun Jin, Fuhua Lin, and Henry Leung</i> | |
| Execution Support to Long Running Workflows | 496 |
| <i>Milton S.S. Junior, Nelson S. Rosa, and Fernando A.A. Lins</i> | |
| Performance Modelling and Evaluation of Enterprise Information Security Technologies | 504 |
| <i>Wen Zeng, Maciej Koutny, and Aad van Moorsel</i> | |
| CrowdPic: An Interactive and Selective Picture Collection Framework for Participatory Sensing Systems | 512 |
| <i>Huihui Chen, Bin Guo, Zhiwen Yu, Shenlong Huangfu, Wenqian Nan, and Wenle Wu</i> | |

CIT-20: Internet of Things and Data

| | |
|--|-----|
| A Study on Content Delivery Strategy for QoE Enhancement in P2P IPTV | 520 |
| <i>Yu-Wei Huang and Yaw-Chung Chen</i> | |
| A New Lookup Model for Multiple Flow Tables of Open Flow with Implementation and Optimization Considerations | 528 |
| <i>Zhi Chen, Yulei Wu, Jingguo Ge, and E. Yuepeng</i> | |
| An Efficient NDN-Based Load Adjustment Scheme for Reduction of Energy Consumption | 533 |
| <i>Tin-Yu Wu, Yu-Wei Wu, and Kai-Lin Cheng</i> | |

| | |
|---|-----|
| Parallel and Pipelined Filter Operator for Hardware-Accelerated Operator Graphs in Semantic Web Databases | 539 |
| <i>Stefan Werner, Dennis Heinrich, Marc Stelzner, Sven Groppe, Rico Backasch, and Thilo Pionteck</i> | |
| Implementing Joins over HBase on Cloud Platform | 547 |
| <i>Ajinkya Gadkari, V.B. Nikam, and B.B. Meshram</i> | |
| Combining Retrieval Results for Balanced Effectiveness and Efficiency in the Big Data Search Environment | 555 |
| <i>Shengli Wu, Chunlan Huang, and Jieyu Li</i> | |

The IEEE 2014 International Symposium on Recent Advances on Computer and Information Technologies (RACIT 2014)

RACIT-01: Information Theory (1)

| | |
|--|-----|
| A C Programming Learning Support System and Its Subjective Assessment | 561 |
| <i>Yu Yan, Nakano Hiroto, Hara Kohei, Suga Shota, and Aiguo He</i> | |
| Distributed Turbo Code for Relay Channel with Dual-Systematic Bits | 567 |
| <i>Lingyun Li, Shujuan Hou, and Peiyao Yang</i> | |
| Structural Analysis of Source Code Collected from Programming Contests | 571 |
| <i>Bokuk Park, Haesung Tak, and Hwan-Gue Cho</i> | |
| An EP-Topk Query over Uncertain Data | 577 |
| <i>Zhibang Yang and Xu Zhou</i> | |

RACIT-02: Information Theory (2)

| | |
|---|-----|
| ContoGram: A Novel Contextual Requirements Engineering Tool | 581 |
| <i>Alan T. Litchfield, Monjur Ahmed, Faruque Hossain Mozumder, Mohammad Nasir Uddin, and Mustafizur Rahman</i> | |
| A Study with MIC-GPU-CPU Heterogeneous Architecture in Electrocardiograms Simulation of Electrocardiogram Based Whole-Heart Model | 587 |
| <i>Wenfeng Shen, Zhaokai Luo, Yin Zhang, Daming Wei, Weimin Xu, Xin Zhu, and Shizhong Yuan</i> | |
| VizMe: An Automatic Visualization Tool for Source Codes | 592 |
| <i>Junseok Cheon, Kyungeun Jo, and Gyun Woo</i> | |
| The Design and Implementation of the Control Rod Current and Circuit System Based on FPGA | 598 |
| <i>Ge Guanglai and Gao Hongmin</i> | |

RACIT-03: Applications, Software, Business, and Social Issues

| | |
|---|-----|
| GRIB: Gesture Recognition Interaction with Mobile Devices for Blind People | 604 |
| <i>Yaodong Huang, Zhiyuan Xu, Ruijin Wang, and Dajiang Chen</i> | |
| User Experience Evaluation of Chinese Travel App Software | 610 |
| <i>Rongyan Xu, Lu Liu, and John Panneerselvam</i> | |
| A Gamified Online System to Aid in Math Lessons of Junior and Middle High Students | 616 |
| <i>Armando M. Toda, Roberto Santos do Carmo, Marcell A.A. Mesquita, Ana Lúcia da Silva, and Jacques D. Brancher</i> | |

| | |
|---|-----|
| The Need for Business Vocabularies in BPM or ISD Related Activities: Survey Based Study | 622 |
| <i>Kestutis Kapocius, Tomas Skersys, and Rimantas Butleris</i> | |
| Towards Dynamic Provenance Tracking in Web Feed Mash-Ups | 630 |
| <i>Watsawee Sansrimahachai</i> | |

RACIT-04: Internet of Things, Social Networking, and Data Trust

| | |
|--|-----|
| SRSO: A Scalable Routing Scheme for Large-Scale Open Flow Networks | 636 |
| <i>Haochi Liang, Peilin Hong, and Wei Zhou</i> | |
| Hybrid Circuit and Packet Satellite Switching Technology Based on Circuit Switch | 642 |
| <i>Su Baoxia, Song Wanying, Ma Qinhua, Zhang Shuyan, and Yao Mingwu</i> | |
| A Scheme to Secure Instant Community Data Access Based on Trust and Contexts | 646 |
| <i>Zheng Yan, Mingjun Wang, and Peng Zhang</i> | |
| AraTRM: Attack Resistible Ant-Based Trust and Reputation Model | 652 |
| <i>Wang Hao and Zhang Yuqing</i> | |
| Research on Enterprise Competitive Intelligence Development and Strategies in the Big Data Era | 658 |
| <i>Jing Di, Bo He, and Wen Li</i> | |

RACIT-05: Wireless and Multimedia Communications (1)

| | |
|--|-----|
| A Radio Access Technology Selection Mechanism for Reducing Signaling Load and Accessing Delay in Heterogeneous Wireless Networks | 664 |
| <i>Ning Li and Fei Long</i> | |
| LT Codes with Limited Feedback | 669 |
| <i>Jia Dai, Fei Zesong, Shangguan Chenglin, Cao Congzhe, and Kuang Jingming</i> | |
| Throughput Optimization in MU-MIMO Systems via Coordinated Vertical Double-Beam Tilting | 674 |
| <i>Minghuan Tang, Gaofeng Cui, Lina Zhao, Cheng Zhou, and Weidong Wang</i> | |
| A Novel and Effective User Scheduling Scheme for Heterogeneous Scenario in LTE-A System | 679 |
| <i>Ruo Cai, Xibo Wang, Yu Wang, Songsong Xiao, Chaowei Wang, and Weidong Wang</i> | |

RACIT-06: Wireless and Multimedia Communications (2)

| | |
|--|-----|
| A New Energy-Efficient Time Synchronization Protocol in Wireless Sensor Networks | 684 |
| <i>Chang Qianfeng, Zhang Menglei, and Yao Mingwu</i> | |
| A Novel Single-Carrier Digital Broadcasting System Based on LDPC Codes in Shortwave | 689 |
| <i>Hui Ma, Hang Yin, Hongfei Guo, and Jianhua Zhao</i> | |
| A Stackelberg Game Approach for Energy-Efficient Resource Allocation and Interference Coordination in Heterogeneous Networks | 694 |
| <i>Yuanshuang Wang, Xia Wang, and Jun Shi</i> | |
| Mobile Framework for Cognitive Assessment: Trail Making Test and Reaction Time Test | 700 |
| <i>Bill Cassidy, Gemma Stringer, and Moi Hoon Yap</i> | |

RACIT-07: Signal Processing, Radar & Microwave, IT for Biomedicine

| | |
|---|-----|
| A Novel Technique for Long-Time Coherent Integration of Supersonic Target Detection | 706 |
| <i>Peng Ge, Lingjiang Kong, and Jianyu Yang</i> | |
| A Packet-Layer Quality Assessment System for VoIP Using Random Forest | 710 |
| <i>Wenjie Zou, Fuzheng Yang, and Xuemin Li</i> | |
| Airborne Asynchronous TDOA Based on Critical Area | 715 |
| <i>Dongqing Zhou, Xing Wang, and Yuanrong Tian</i> | |
| Computer Simulation of Cathode Ablation for Atrial Fibrillation | 721 |
| <i>Xin Zhu, Di Yang, Weijia Lu, Wenxi Chen, Daming Wei, Koji Fukuda, and Hiroaki Shimokawa</i> | |
| 4-D Hippocampus Measurements of Neurite Growth <i>in vitro</i> | 726 |
| <i>K.P. Dempsey, K.P. Lam, W.A. Smith, D.J. Collins, D.J. Mazzocchi-Jones, Y. Yang, and J.B. Richardson</i> | |

RACIT-08: Pattern Recognition, Data Mining, and Management

| | |
|--|-----|
| A Global Feature for Non-Rigid 3D Shape Retrieval with Shape Similarity | 732 |
| <i>Takenobu Kazuma, Masayoshi Kataoka, and Aiguo He</i> | |
| Towards Ontology Construction from Arabic Texts-A Proposed Framework | 737 |
| <i>Abeer Al-Arfaj and Abdulmalik Al-Salman</i> | |
| Mining Relevant Examples for Learning in ITS Student Models | 743 |
| <i>Ritu Chaturvedi and C.I. Ezeife</i> | |
| Night-Time Road Boundary Detection with Infrared Channel Features Classifier | 751 |
| <i>Jing Dai, Yuqiang Fang, Tao Wu, Dawei Zhao, and Hangen He</i> | |
| Multi-Label Learning Based on Label Entropy Guided Clustering | 756 |
| <i>Ju-Jie Zhang, Min Fang, and Xiao Li</i> | |

The 2014 IEEE International Workshop on Data, Text, Web, and Social Networking Mining (DTWSM 2014)

DTWSM-01

| | |
|--|-----|
| Using Mind Map as Learning Tool in ‘Data Structure’ Teaching | 761 |
| <i>Feijuan He, Xianglin Miao, Bei Wu, and Siyu Yao</i> | |
| A Grid-Based Approach for Similarity Mining of Massive Geospatial Trajectories | 765 |
| <i>Naveen Nandan</i> | |
| A Review on Privacy-Preserving Data Mining | 769 |
| <i>Xueyun Li, Zheng Yan, and Peng Zhang</i> | |
| Security Related Data Mining | 775 |
| <i>Mehrnoosh Monshizadeh and Zheng Yan</i> | |

DTWSM-02

| | |
|---|-----|
| Modelling Metropolitan Activity through Abductive Reasoning on Geographic Space | 783 |
| <i>Salvatore F. Pileggi and Robert Amor</i> | |
| Study on Application of Grey Prediction Fuzzy PID Control in Water and Fertilizer Precision Irrigation | 789 |
| <i>Peng Bi and Jinfeng Zheng</i> | |
| Feature Description by Improved Local Gabor Filters and ICA | 792 |
| <i>Fan Jiang and Liya Fan</i> | |
| A Network Performance Based Data Placement Policy in Distributed Data-Intensive Applications | 795 |
| <i>Dawei Xu, Xianglin Miao, Peng Hu, and Zhongzhi Luan</i> | |
| Human Action Recognition Based on AdaBoost Algorithm for Feature Extraction | 801 |
| <i>Xiaofei Ji, Lu Zhou, and Yibo Li</i> | |

The 2014 IEEE International Workshop on Mobile Multimedia Networks (MMN 2014)

MMN-01

| | |
|--|-----|
| Fast Rate Estimation for H.264/AVC CAVLC Encoder Based on Parallel Processing | 806 |
| <i>Wei Li, Liangliang Jiang, Fuzheng Yang, and Guangliang Ren</i> | |
| Sustainability-Driven Power Control for Energy Harvesting Enhanced Wireless Transmission | 812 |
| <i>Qinghe Du, Pinyi Ren, Yichen Wang, and Li Sun</i> | |
| A QoS-Aware and Adaptive Soft Frequency Reuse Scheme for Interference Coordination in MMN | 818 |
| <i>Yuanshuang Wang, Xia Wang, and Jun Shi</i> | |
| Construction Methods of S-QC-LDPC Based on 0-1 Programming Algorithm | 823 |
| <i>Jun Shi, Xia Wang, and Yuanshuang Wang</i> | |

The 2014 IEEE International Workshop on Electromagnetic Spectrum Monitoring Based on Wireless Sensor Networks (ESM-WSNs 2014)

ESM-WSNs-01

| | |
|--|-----|
| Research on VHF/UHF Signal Localization Techniques Based on ITU-R P.1546 Radio Wave Propagation Model | 827 |
| <i>Wen Wei, Nan Xia, Xiaofei Zhang, and Keping Song</i> | |
| A Novel Detector Based on Parameter-Induced Bistable Stochastic Resonance for FSK Signal Processing at Low SNR | 832 |
| <i>Jin Liu, Zan Li, Rui Gao, Jun Bo, and Lei Guan</i> | |
| Blind Multiple Frequency Offsets and Channel Estimation Using Particle Filter in Cooperative Transmission Wireless Networks | 837 |
| <i>Li Anping and Xia Nan</i> | |

| | |
|--|-----|
| Research on the Protection Distances for the Interference from the Fixed-Satellite Earth Stations to the Space Research Earth Stations | 842 |
| <i>Jianxin Li and Wenhan Yang</i> | |
| A Simple Channel-Covariance Based SINR Union Bound for the Multi-users in Downlink Beamforming | 846 |
| <i>Weiliang Han and Jianhua Ge</i> | |
| Research and Implementation of Anti-Jamming Technology for Wireless Data Communication | 851 |
| <i>Sun Hao, Fei Wei, and Kang Peichuan</i> | |

ESM-WSNs-02

| | |
|--|-----|
| Efficient Spectrum Sensing Scheme under Low SNR | 856 |
| <i>Rui Gao, Xiaojun Chen, Zan Li, Mengqiu Yang, and Haixun Chang</i> | |
| The Impact of Spectrum Sensing on Primary User in Cognitive Relay Networks | 860 |
| <i>Rong Zhang, Jiangbo Si, and Haiyan Huang</i> | |
| Approximate Entropy Detection Spectrum Sensing in Cognitive Radio | 865 |
| <i>Chen Xiaojun, Li Yin, and Deng Jingya</i> | |
| Performance Analysis of Cognitive Bluetooth Networks Based on the Orthogonal FH Sequences | 869 |
| <i>Lei Guan, Li Zan, Jiangbo Si, and Xinxin Liang</i> | |
| Impact of Channel Estimation Error Upon Distributed Estimation Systems | 876 |
| <i>Binzhe Wang, Xiangli Liu, and Zan Li</i> | |
| Green Hierarchical Radio-over-Fiber Distributed Antenna System Based Wireless Sensor Network for Spectrum Monitoring | 880 |
| <i>Xi Shen, Shuhui Jiang, Xi Wu, Dayong Liu, Xiaofei Zhang, and Jie Zhu</i> | |

The 2014 IEEE International Workshop on Intelligent Sensing and Processing for Image/Video/Radar in Internet of Things (ivrIoT2014)

ivrIoT-01

| | |
|--|-----|
| Feature Extraction and Facial Expression Recognition Based on Bezier Curve | 884 |
| <i>Hong Bao and Tao Ma</i> | |
| Fast Remote Sensing Image Registration Algorithm Using Spatial Masks | 888 |
| <i>Aiman Mousa and Xinbo Gao</i> | |
| Poles Extracting and Analyzing of Complex Stealth Target Based on Matrix Pencil Method | 894 |
| <i>Liang Man, Xiao Wei, Chunzhu Dong, and Zhihe Xiao</i> | |
| Study on Target Pulse Echo Characteristics for Fuse in the Near Field | 899 |
| <i>Yanjie Cui, Wenqiang Chen, Xiangyang Zhang, and Jianping Zheng</i> | |
| Structure and Operation Mechanism of Internet Virtual Brain | 903 |
| <i>Feng Liu and Yong Shi</i> | |
| Type-2 Fuzzy Logic Based DCT for Intelligent Image Compression | 908 |
| <i>Yunhai Chen and Xiong Luo</i> | |

The Third IEEE International Workshop on Large-Scale Network Security (LSNS 2014)

LSNS-01

| | |
|--|-----|
| An Anti-Leech Method for Digital Library | 913 |
| <i>Yang Guang-Yuan and Ning Zuo-Bin</i> | |
| An Improved Certificateless Aggregate Signature | 919 |
| <i>Jiang Deng, Chunxiang Xu, Huai Wu, and Guangyuan Yang</i> | |
| Research of Big Data Analysis on Rough Set and Electromagnetism-Like Mechanism Algorithm | 923 |
| <i>Shang Yun</i> | |
| Based Sliding Window Cloud Computing Platform of Network Intrusion Detection Algorithm | 927 |
| <i>He Xue-Ni</i> | |
| Objects Specific Role: An Approach to Solving Roles Redundant Problem | 931 |
| <i>Xingang Wang, Suiping Qi, Hui Guo, Na Guo, and Xiaoling Sun</i> | |

Author Index