

Commenced Publication in 1973

Founding and Former Series Editors:

Gerhard Goos, Juris Hartmanis, and Jan van Leeuwen

Editorial Board

David Hutchison

Lancaster University, Lancaster, UK

Takeo Kanade

Carnegie Mellon University, Pittsburgh, PA, USA

Josef Kittler

University of Surrey, Guildford, UK

Jon M. Kleinberg

Cornell University, Ithaca, NY, USA

Friedemann Mattern

ETH Zurich, Zurich, Switzerland

John C. Mitchell

Stanford University, Stanford, CA, USA

Moni Naor

Weizmann Institute of Science, Rehovot, Israel

C. Pandu Rangan

Indian Institute of Technology, Madras, India

Bernhard Steffen

TU Dortmund University, Dortmund, Germany

Demetri Terzopoulos

University of California, Los Angeles, CA, USA

Doug Tygar

University of California, Berkeley, CA, USA

Gerhard Weikum

Max Planck Institute for Informatics, Saarbrücken, Germany

More information about this series at <http://www.springer.com/series/7409>

Xingming Sun · Han-Chieh Chao
Xingang You · Elisa Bertino (Eds.)

Cloud Computing and Security

Third International Conference, ICCCS 2017
Nanjing, China, June 16–18, 2017
Revised Selected Papers, Part II

Editors

Xingming Sun
Nanjing University of Information Science
and Technology
Nanjing
China

Han-Chieh Chao
National Dong Hwa University
Shoufeng
Taiwan

Xingang You
China Information Technology Security
Evaluation Center
Nanjing
China

Elisa Bertino
Department of Computer Science
Purdue University
West Lafayette, IN
USA

ISSN 0302-9743 ISSN 1611-3349 (electronic)
Lecture Notes in Computer Science
ISBN 978-3-319-68541-0 ISBN 978-3-319-68542-7 (eBook)
<https://doi.org/10.1007/978-3-319-68542-7>

Library of Congress Control Number: 2017956776

LNCS Sublibrary: SL3 – Information Systems and Applications, incl. Internet/Web, and HCI

© Springer International Publishing AG 2017

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Printed on acid-free paper

This Springer imprint is published by Springer Nature
The registered company is Springer International Publishing AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Preface

The two-volume set of proceedings (LNCS 10602 and 10603) contains the papers presented at ICCCS 2017: the Third International Conference on Cloud Computing and Security held during June 16–18, 2017, in Nanjing, China. The conference was hosted by the College of Computer and Software at the Nanjing University of Information Science and Technology, who provided the wonderful facilities and material support. We made use of the excellent EasyChair submission and reviewing software.

The aim of this conference is to provide an international forum for the latest results of research, development, and applications in the field of cloud computing and information security. This year we received more than 391 submissions from 15 countries and regions, including USA, UK, France, Australia, Ireland, South Korea, South Africa, India, Iraq, Kazakhstan, Indonesia, Vietnam, Ghana, China, and Taiwan. Each submission was allocated to three Program Committee (PC) members and each paper received on average three reviews. The committee decided to accept 116 papers, yielding an acceptance rate of 29.7%.

The program also included six distinguished talks. “Green Networking and Computing: New Perspectives and Challenges Within Energy-Oriented Infrastructures and Devices” by Dr. Aniello Castiglione, University of Salerno, Italy; “Content-Based Search over Encrypted Text Data in Cloud” by Dr. Zhangjie Fu, Nanjing University of Information Science and Technology, China; “Error Correcting Codes in Data Hiding and Secret Image Sharing” by Dr. Ching-Nung Yang, National Dong Hwa University, Taiwan; “Cloud-of-Things and Edge Computing: Recent Advances and Future Trends” by Dr. Mohammad Mehedi Hassan, King Saud University (KSU), Kingdom of Saudi Arabia; “SDN-Enabled Cloud Data Center” by Prof. Ren-Hung Hwang, National Chung Cheng University, Taiwan; and “Exploring the Geospatial Data: When Visualization Meets Query Processing” by Dr. Zhifeng Bao, RMIT University, Australia.

We would like to extend our sincere thanks to all authors who submitted papers to ICCCS 2017 and to all PC members. It was a truly great experience to work with such talented and hard-working researchers. We also appreciate the external reviewers for assisting the PC members in their particular areas of expertise. Finally, we would like to thank all attendees for their active participation and the organizing team who nicely managed this conference. We look forward to seeing you again at next year’s ICCCS.

June 2017

Xingming Sun
Han-Chieh Chao
Xingang You
Elisa Bertino

Organization

General Chairs

Xingming Sun	Nanjing University of Information Science and Technology, China
Han-Chieh Chao	National Dong Hwa University, Taiwan
Xingang You	China Information Technology Security Evaluation Center, China
Elisa Bertino	University of Purdue, USA

Organizing Committee Chairs

Jian Shen	Nanjing University of Information Science and Technology, China
Kuan-Ching Li	Providence University, Taiwan
Chih-Hsien Hsia	Chinese Culture University, Taiwan
Shuangkui Xia	Beijing Institute of Electronics Technology and Application, China

Technical Program Committee Chairs

Chin-Feng Lai	National Cheng Kung University, Taiwan
Yang Xiao	The University of Alabama, USA
Aniello Castiglione	University of Salerno, Italy
Yunbiao Guo	China Information Technology Security Evaluation Center, China
Zhangjie Fu	Nanjing University of Information Science and Technology, China

Steering Committee Chairs

Xingming Sun	Nanjing University of Information Science and Technology, China
Han-Chieh Chao	National Dong Hwa University, Taiwan
Alex Liu	Michigan State University, USA
Yang Xiao	The University of Alabama, USA
Zhiqiu Huang	Nanjing University of Aeronautics and Astronautics, China

Technical Program Committee

Ming Yin	Harvard University, USA
Saeed Arif	University of Algeria, Algeria
Zhifeng Bao	Royal Melbourne Institute of Technology University, Australia
Hanhua Chen	Huazhong University of Science and Technology, China
Jie Chen	East China Normal University, China
Xiaofeng Chen	Xidian University, China
Ilyong Chung	Chosun University, South Korea
Jintai Ding	University of Cincinnati, USA
Zhangjie Fu	Nanjing University of Information Science and Technology, China
Jinguang Han	Nanjing University of Finance and Economics, China
Jiguo Li	Hohai University, China
Kuan-Ching Li	Providence University, Taiwan, China
Zhe Liu	University of Waterloo, Canada
Sungyoung Lee	Kyung Hee University, South Korea
Mohammad Mehedi Hassan	King Saud University, Saudi Arabia
Debiao He	Wuhan University, China
Wien Hong	Nanfeng College of Sun Yat-Sen University, China
Qiong Huang	South China Agricultural University, China
Xinyi Huang	Fujian Normal University, China
Yongfeng Huang	Tsinghua University, China
Zhiqiu Huang	Nanjing University of Aeronautics and Astronautics, China
Patrick C.K. Hung	University of Ontario Institute of Technology, Canada
Hai Jin	Huazhong University of Science and Technology, China
Sam Tak Wu Kwong	City University of Hong Kong, SAR China
Xiangyang Li	Illinois Institute of Technology, USA
Yangming Li	University of Washington, USA
Quansheng Liu	University of South Brittany, France
Junzhou Luo	Southeast University, China
Yonglong Luo	Anhui Normal University, China
Sangman Moh	Chosun University, South Korea
Yi Mu	University of Wollongong, Australia
Zemin Ning	Wellcome Trust Sanger Institute, UK
Shaozhang Niu	Beijing University of Posts and Telecommunications, China
Jeff Z. Pan	University of Aberdeen, UK
Wei Pang	University of Aberdeen, UK
Rong Peng	Wuhan University, China
Jiaohua Qin	Central South University of Forestry and Technology, China
Yanzhen Qu	Colorado Technical University, USA
Kui Ren	State University of New York, USA
Shengli Sheng	University of Central Arkansas, USA

Robert Simon Sherratt	University of Reading, UK
Jianyong Sun	Xi'an Jiaotong University, China
Tsuyoshi Takagi	Kyushu University, Japan
Xianping Tao	Nanjing University, China
Yoshito Tobe	Aoyang University, Japan
Pengjun Wan	Illinois Institute of Technology, USA
Jian Wang	Nanjing University of Aeronautics and Astronautics, China
Honggang Wang	University of Massachusetts-Dartmouth, USA
Liangmin Wang	Jiangsu University, China
Xiaojun Wang	Dublin City University, Ireland
Q.M. Jonathan Wu	University of Windsor, Canada
Shaoen Wu	Ball State University, USA
Zhihua Xia	Nanjing University of Information Science and Technology, China
Yang Xiang	Deakin University, Australia
Naixue Xiong	Northeastern State University, USA
Aimin Yang	Guangdong University of Foreign Studies, China
Ching-Nung Yang	National Dong Hwa University, Taiwan
Ming Yang	Southeast University, China
Qing Yang	Montana State University, USA
Xinchun Yin	Yangzhou University, China
Yong Yu	University of Electronic Science and Technology of China, China
Mingwu Zhang	Hubei University of Technology, China
Wei Zhang	Nanjing University of Posts and Telecommunications, China
Xinpeng Zhang	University of Science and Technology of China, China
Yan Zhang	Simula Research Laboratory, Norway
Yao Zhao	Beijing Jiaotong University, China
Yun Q. Shi	New Jersey Institute of Technology, USA
Eric Wong	University of Texas at Dallas, USA
Frank Y. Shih	New Jersey Institute of Technology, USA
Haixiang Lin	Leiden University, The Netherlands
Haoran Xie	The Education University of Hong Kong, SAR China
Xiaodong Lin	University of Ontario Institute of Technology, Canada
Joseph Liu	Monash University, Australia
Jieren Cheng	Hainan University, China
Linna Zhou	University of International Relations, China
Bing Chen	Nanjing University of Aeronautics and Astronautics, China
Ruili Geng	Spectral MD, USA
Ding Wang	Peking University, China

Organizing Committee

Baowei Wang	Nanjing University of Information Science and Technology, China
Jielin Jiang	Nanjing University of Information Science and Technology, China
Leiming Yan	Nanjing University of Information Science and Technology, China
Lizhi Xiong	Nanjing University of Information Science and Technology, China
Qing Tian	Nanjing University of Information Science and Technology, China
Xianyi Chen	Nanjing University of Information Science and Technology, China
Yadang Chen	Nanjing University of Information Science and Technology, China
Yan Kong	Nanjing University of Information Science and Technology, China
Zilong Jin	Nanjing University of Information Science and Technology, China
Zhaoqing Pan	Nanjing University of Information Science and Technology, China
Zhiguo Qu	Nanjing University of Information Science and Technology, China
Zhili Zhou	Nanjing University of Information Science and Technology, China
Le Sun	Nanjing University of Information Science and Technology, China
Jian Su	Nanjing University of Information Science and Technology, China

Contents – Part II

Information Security

Practical Privacy-Preserving Outsourcing of Large-Scale Matrix Determinant Computation in the Cloud	3
<i>Shaoping Fu, Yunpeng Yu, and Ming Xu</i>	
Probability- p Order-Preserving Encryption	16
<i>Ce Yang, Weiming Zhang, Jiachen Ding, and Nenghai Yu</i>	
DLPDS: Learning Users' Information Sharing Behaviors for Privacy Default Setting in Recommender System	29
<i>Hongchen Wu and Huaxiang Zhang</i>	
New Construction of Low-Hit-Zone Frequency Hopping Sequence Sets with Optimal Partial Hamming Correlation	40
<i>Zhengqian Li, Pinhui Ke, and Zhifan Ye</i>	
Detecting and Preventing DDoS Attacks in SDN-Based Data Center Networks	50
<i>Po-Ching Lin, Yu-Ting Hsu, and Ren-Hung Hwang</i>	
Bayesian Game Based Pseudo Honeypot Model in Social Networks	62
<i>Miao Du, Yongzhong Li, Qing Lu, and Kun Wang</i>	
Conducting Correlated Laplace Mechanism for Differential Privacy.	72
<i>Hao Wang, Zhengquan Xu, Lizhi Xiong, and Tao Wang</i>	
A Symmetric Authenticated Proxy Re-encryption Scheme with Provable Security.	86
<i>Zhiniang Peng, Shaohua Tang, and Linzhi Jiang</i>	
Quantum Secret Sharing in Noisy Environment.	100
<i>Ming-Ming Wang, Zhi-Guo Qu, and Mohamed Elhoseny</i>	
SimHash-Based Similar Neighbor Finding for Scalable and Privacy-Preserving Service Recommendation	113
<i>Yanwei Xu and Lianying Qi</i>	
Universally Composable Three-Party Password Authenticated Key Exchange	123
<i>Qihui Zhang, Xuexian Hu, Jianghong Wei, and Wenfen Liu</i>	

A High-Capacity Quantum Secret Sharing Protocol Based on Single D-Level Particles	138
<i>Xiang Lin, Juan Xu, Hu Liu, Xuwei Tang, and Maomao Fu</i>	
An Inconsistency Detection Method for Security Policy and Firewall Policy Based on CSP Solver	147
<i>Yi Yin, Yuichiro Tateiwa, Yun Wang, Yoshiaki Katayama, and Naohisa Takahashi</i>	
Reversible Data Hiding in Encrypted Image Based on Block Classification Scrambling	162
<i>Fan Chen, Hongjie He, Tinghuai Ma, and Shu Yan</i>	
A Mutation Approach of Detecting SQL Injection Vulnerabilities	175
<i>Yanyu Huang, Chuan Fu, Xuan Chen, Hao Guo, Xiaoyu He, Jin Li, and Zheli Liu</i>	
A Chaotic Map-Based Authentication and Key Agreement Scheme with User Anonymity for Cloud Computing	189
<i>Fan Wu and Lili Xu</i>	
An Anonymous User Authentication and Key Distribution Protocol for Heterogenous Wireless Sensor Network	201
<i>Xin Zhang and Fengtong Wen</i>	
Privacy-Preserving Multi-party Aggregate Signcryption for Heterogeneous Systems.	216
<i>Shufen Niu, Zhenbin Li, and Caifen Wang</i>	
An Enhanced Method of Trajectory Privacy Preservation Through Trajectory Reconstruction	230
<i>Yan Dai and Jie Shao</i>	
Efficient and Short Identity-Based Deniable Authenticated Encryption	244
<i>Chunhua Jin and Jianyang Zhao</i>	
Towards Fully Homomorphic Encryption From Gentry-Peikert-Vaikuntanathan Scheme	256
<i>Gang Du, Chunguang Ma, Zengpeng Li, and Ding Wang</i>	
Privacy-Preserving Medical Information Systems Using Multi-authority Content-Based Encryption in Cloud	268
<i>Rui Guo, Xiong Li, and Dong Zheng</i>	
Detect Storage Vulnerability of User-Input Privacy in Android Applications with Static and Dynamic Analysis.	280
<i>Li Jiang and Yi Zhuang</i>	

Certificateless Cryptography with KGC Trust Level 3 Revisited	292
<i>Fei Li, Wei Gao, Dongqing Xie, and Chunming Tang</i>	
Server-Less Lightweight Authentication Protocol for RFID System	305
<i>Jing Li, Zhiping Zhou, and Ping Wang</i>	
Efficient CP-ABE with Non-monotonic Access Structures	315
<i>Yong Cheng, Huaizhe Zhou, Jun Ma, and Zhiying Wang</i>	
Image Authentication Based on Least Significant Bit Hiding and Double Random Phase Encoding Technique	326
<i>Faliu Yi, Yousun Jeoung, Ruili Geng, and Inkyu Moon</i>	
On-Line Intrusion Detection Model Based on Approximate Linear Dependent Condition with Linear Latent Feature Extraction	336
<i>Jian Tang, Meijuan Jia, Jian Zhang, and Meiyang Jia</i>	
Differential Direction Adaptive Based Reversible Information Hiding	346
<i>Feipeng Lin, Bo Wang, and Yabin Li</i>	
Detection of Jitterbug Covert Channel Based on Partial Entropy Test	357
<i>Hao Wang, Guangjie Liu, Weiwei Liu, Jiangtao Zhai, and Yuewei Dai</i>	

Multimedia Applications

Frame-Deletion Detection for Static-Background Video Based on Multi-scale Mutual Information	371
<i>Yanjia Zhao, Tianming Pang, Xiaoyun Liang, and Zhaohong Li</i>	
Learning Based Fast H.264/AVC to HEVC INTRA Video Transcoding for Cloud Media Computing.	385
<i>Yun Zhang, Na Li, and Zongju Peng</i>	
A Perceptual Encryption Scheme for HEVC Video with Lossless Compression.	396
<i>Juan Chen, Fei Peng, and Min Long</i>	
Spatial-Temporal Correlation Based Multi-resolution Hybrid Motion Estimation for Frame Rate Up-Conversion	408
<i>Bingyu Ji, Ran Li, and Changan Wu</i>	
A Robust Seam Carving Forgery Detection Approach by Three-Element Joint Density of Difference Matrix	418
<i>Wenwu Gu, Gaobo Yang, Dengyong Zhang, and Ming Xia</i>	

Chinese Remainder Theorem-Based Secret Image Sharing for (k, n) Threshold	433
<i>Xuehu Yan, Yuliang Lu, Lintao Liu, Song Wan, Wanmeng Ding, and Hanlin Liu</i>	
Kernel Searching Strategy for Recommender Searching Mechanism	441
<i>Li Zhou, Weiwei Yuan, Kangya He, Chenliang Li, and Qiang Li</i>	
A Robust Quantum Watermark Algorithm Based on Quantum Log-Polar Images	450
<i>Zhiguo Qu, Zhenwen Cheng, and Mingming Wang</i>	
Adaptive Hybrid Wavelet Regularization Method for Compressive Imaging	461
<i>Lingjun Liu, Weiyu Yu, and Cui Yang</i>	
Registration of OCT Fundus Images with Color Fundus Images Based on Invariant Features	471
<i>Ping Li, Qiang Chen, Wen Fan, and Songtao Yuan</i>	
View-Based 3D Model Retrieval Based on Distance Learning	483
<i>Yang Shi, Nannan Liu, Xingjian Long, and Lei Xu</i>	
PCANet for Color Image Classification in Various Color Spaces	494
<i>Jiasong Wu, Shijie Qiu, Rui Zeng, Lotfi Senhadji, and Huazhong Shu</i>	
A Method of Group Behavior Analysis for Enhanced Affinity Propagation	506
<i>Xinning Li, Zhiping Zhou, and Lele Liu</i>	
A Median Filtering Forensics Approach Based on Machine Learning	518
<i>Bin Yang, Zhenyu Li, Weifeng Hu, and Enguo Cao</i>	
Spatiotemporal Radio Tomographic Imaging with Bayesian Compressive Sensing for RSS-Based Indoor Target Localization	528
<i>Baolin Shang, Jiaju Tan, Xiaobing Hong, Xuemei Guo, Guoli Wang, Gonggui Liu, and Shouren Xue</i>	
Detection in SAR Images Based on Histogram and Improved Elitist Genetic Fuzzy Clustering	541
<i>Ronghua Shang, Weitong Zhang, and Licheng Jiao</i>	
Research on Cognitive Radio Spectrum Sensing Method Based on Information Geometry	554
<i>Qiang Chen, Pin Wan, Yonghua Wang, Jiangfan Li, and Yirui Xiao</i>	

Android Malware Detection Using Hybrid Analysis and Machine Learning Technique.	565
<i>Fan Yang, Yi Zhuang, and Jun Wang</i>	
Workload-Aware Page-Level Flash Translation Layer for NAND Flash-Based Storage Systems	576
<i>Huibing Wang, Mingwei Lin, Jinbo Xiong, Li Lin, and Ruliang Xiao</i>	
Biclustering Evolutionary Spatiotemporal Community in Global Trading Network.	589
<i>Leiming Yan, Zeyu Chen, and Ping Zang</i>	
Optimization and Classification	
Cost Optimization for Time-Bounded Request Scheduling in Geo-Distributed Datacenters	601
<i>Xiaohui Wei, Lanxin Li, Xingwang Wang, and Yuanyuan Liu</i>	
The Application of Naive Bayes Classifier in Name Disambiguation	611
<i>Na Li and Jin Han</i>	
Mobility Prediction-Based Service Scheduling Optimization Algorithm in Cloudlets	619
<i>Lei Shi, Xi Fu, and Jing Li</i>	
Single Appliance Recognition Using Statistical Features Based k-NN Classification	631
<i>Qi Liu, Hao Wu, Xiaodong Liu, and Nigel Linge</i>	
Performance Measurement and Configuration Optimization of Virtual Machines Based on the Bayesian Network.	641
<i>Jia Hao, Binbin Zhang, Kun Yue, Juan Wang, and Hao Wu</i>	
Image Recapture Detection Through Residual-Based Local Descriptors and Machine Learning	653
<i>Jian Li and Guojing Wu</i>	
A Method Towards Community Detection Based on Estimation of Distribution Algorithm.	661
<i>Yawen Chen, Wenan Tan, and Yibo Pan</i>	
Sentiment Analysis with Improved Adaboost and Transfer Learning Based on Gaussian Process	672
<i>Yuling Liu, Qi Li, and Guojiang Xin</i>	
HL-HAR: Hierarchical Learning Based Human Activity Recognition in Wearable Computing	684
<i>Yan Liu, Wentao Zhao, Qiang Liu, Linyuan Yu, and Dongxu Wang</i>	

An Improved Quantum-Inspired Evolutionary Algorithm for Knapsack Problems	694
<i>Sheng Xiang, Yigang He, Liuchen Chang, Kehan Wu, and Chaolong Zhang</i>	
Output-Based Sampled Data Control for Linear Systems: A Measurement Error Estimation Approach	709
<i>Yuelin Shen and Wenbing Zhang</i>	
Adaptive Firefly Algorithm with a Modified Attractiveness Strategy	717
<i>Wenjun Wang, Hui Wang, Jia Zhao, and Li Lv</i>	
Newton Method for Interval Predictor Model with Sphere Parameter Set	727
<i>Xuan Xiao, Peng Wang, and Jian-Hong Wang</i>	
A Conjugate Gradient Algorithm with Yuan-Wei-Lu Line Search	738
<i>Gonglin Yuan, Wujie Hu, and Zhou Sheng</i>	
IU-PMF: Probabilistic Matrix Factorization Model Fused with Item Similarity and User Similarity	747
<i>Yilong Shi, Hong Lin, and Yuqiang Li</i>	
New Delay-Dependent Stability for Neutral Systems with Its Application to Partial Circuit Model	759
<i>Tao Li, Ting Wang, Jin Deng, and Li Zhang</i>	
A Quantitative Evaluation Method of Surveillance Coverage of UAVs Swarm	772
<i>Wei Li, Changxin Huang, Kaimin Chen, and Songchen Han</i>	
Chaos Prediction of Fast Fading Channel of Multi-rates Digital Modulation Using Support Vector Machines.	783
<i>Yijing Ren and Ren Ren</i>	
Short Paper	
System Log-Based Android Root State Detection	793
<i>Junjie Jin and Wei Zhang</i>	
Quantified Attribute Access Control Model for Cloud Storage Platform	799
<i>DongMin Li, Jing Li, Sai Liu, and Chao Wang</i>	
Dynamically-Enabled Defense Effectiveness Evaluation in Home Internet Based on Vulnerability Analysis	805
<i>Ting Wang, Min Lei, Jingjie Chen, Shiqi Deng, and Yu Yang</i>	
The Formal Transformation of AADL Based on Z-CoIA	816
<i>Fugao Zhang and Zining Cao</i>	

Masking Signature Data Errors of Software-Based Control Flow Checking Techniques Employing Redundancy Signature	823
<i>Liping Liu, Linlin Ci, and Wei Liu</i>	
The Analysis of Key Nodes in Complex Social Networks	829
<i>Yibo Pan, Wenan Tan, and Yawen Chen</i>	
Novel Schemes for Bike-Share Service Authentication Using Aesthetic QR Code and Color Visual Cryptography	837
<i>Li Li, Lina Li, Shanqing Zhang, Zaorang Yang, Jianfeng Lu, and Chin-Chen Chang</i>	
An Improved RFID Search Protocol	843
<i>Ping Wang and Zhiping Zhou</i>	
A Developmental Evolutionary Algorithm for 0-1 Knapsack Problem	849
<i>Ming Zhong and Bo Xu</i>	
WiSmart : Robust Human Access and Identification for Smart Homes Using WiFi Signals	855
<i>Shangqing Liu, Yanchao Zhao, and Bing Chen</i>	
Robust Face Recognition Model with Adaptive Correction Term via Generalized Alternating Direction Method of Multipliers	862
<i>Can Wu, Yunhai Xiao, and Wen-Jie Liu</i>	
Author Index	875

Contents – Part I

Information Hiding

Print-Scan Resilient Binary Map Watermarking Based on Extended Additive Noise Model and Scrambling.	3
<i>Fei Peng, Shuai-ping Wang, Gang Luo, and Min Long</i>	
A New Universal Quantum Gates and Its Simulation on GPGPU	16
<i>Huimin Luo, Jiabin Yuan, and Wenjing Dai</i>	
Data Hiding-Based Video Error Concealment Method Using Compressed Sensing	28
<i>Yanli Chen, Hongxia Wang, and Hanzhou Wu</i>	
A Novel Robust Reversible Watermarking Scheme Based on IWT	39
<i>Shuang Yu, Jian Li, and Jinwei Wang</i>	
An Improved Reversible Information Hiding Scheme Based on AMBTC Compressed Images.	49
<i>Yi Puyang, Zhaoxia Yin, Guorui Feng, and Andrew K. Abel</i>	
An Efficient Copy-Move Detection Algorithm Based on Superpixel Segmentation and Harris Key-Points	61
<i>Yong Liu, Hong-Xia Wang, Han-Zhou Wu, and Yi Chen</i>	
Improved CMD Adaptive Image Steganography Method	74
<i>Yingbo Yu and Xin Liao</i>	
Quantum Computer Simulation on GPU Cluster Incorporating Data Locality	85
<i>Zhen Li and Jiabin Yuan</i>	
Tampering Detection in Oral History Video Using Watermarking	98
<i>Jianfeng Lu, Peng Gao, Shanqing Zhang, Li Li, Wenqiang Yuan, and Qili Zhou</i>	
Steganalysis with CNN Using Multi-channels Filtered Residuals.	110
<i>Yafei Yuan, Wei Lu, Bingwen Feng, and Jian Weng</i>	
Coverless Text Information Hiding Method Using the Frequent Words Distance	121
<i>Jianjun Zhang, Yicheng Xie, Lucai Wang, and Haijun Lin</i>	

Improved STDM Watermarking Using Semantic Information-Based JND Model	133
<i>Chunxing Wang, Teng Zhang, Wenbo Wan, Jiande Sun, Jing Li, and Meiling Xu</i>	
The Categories of Quantum Information Hiding Protocol	143
<i>Shujiang Xu, Lianhai Wang, Guangqi Liu, Xiaohui Han, Dawei Zhao, and Lijuan Xu</i>	
Coverless Information Hiding Technology Research Based on News Aggregation	153
<i>Conghua Liu, Gang Luo, and Zuwei Tian</i>	
Cloud Computing	
SIEM Based on Big Data Analysis	167
<i>Tianmu Li and Leiming Yan</i>	
Workload-Aware VM Consolidation in Cloud Based on Max-Min Ant System	176
<i>Hongjie Zhang, Guansheng Shu, Shasha Liao, Xi Fu, and Jing Li</i>	
Parallel Service Selection Method Based on Adaptive Cloud Model for Mobile Application	189
<i>Longchang Zhang, Yanhong Yang, and Decai Sun</i>	
A Hybrid Artificial Bee Colony Algorithm to Solve Multi-objective Hybrid Flowshop in Cloud Computing Systems	201
<i>Jun-qing Li, Yu-yan Han, and Cun-gang Wang</i>	
A Group-Based Replica Consistency Schema for Cloud Storage	214
<i>Guoping Du, Wenbin Yao, Dongbin Wang, and Xiaole Wen</i>	
A Multi-objective Optimization Scheduling Method Based on the Improved Differential Evolution Algorithm in Cloud Computing	226
<i>Zhe Zheng, Kun Xie, Shiming He, and Jun Deng</i>	
A Network Calculus Analysis for the Baseband Processing Capacity in Cloud Radio Access Network	239
<i>Muzhou Xiong, Haixin Liu, and Deze Zeng</i>	
Live Migration Among CloudBased on MOOSE Address	251
<i>Yubing Mao and Zhengyou Xia</i>	
Achieving Proof of Shared Ownership for the Shared File in Collaborative Cloud Applications	262
<i>Yuanyuan Zhang, Jinbo Xiong, Mingwei Lin, Lili Wang, and Xuan Li</i>	

Design and Test of the Intelligent Rubber Tapping Technology Evaluation Equipment Based on Cloud Model	275
<i>Jieren Cheng, Kuanqi Cai, Boyi Liu, and Xiangyan Tang</i>	
An Affective Computing and Fuzzy Logic Framework to Recognize Affect for Cloud-based E-Learning Environment Using Emoticons	288
<i>Kyle Morton, Yanzhen Qu, and Marilyn Carroll</i>	
Cloud Management Systems and Virtual Desktop Infrastructure Load Balancing Algorithms - A Survey	300
<i>Micheal Ernest Taylor and Jian Shen</i>	

IoT Applications

Design and Deployment of Wireless Sensor Networks for Flood Detection in Indonesia	313
<i>Irfan Dwiguna Sumitra, Rongtao Hou, and Sri Supatmi</i>	
An Android App Recommendation Approach by Merging Network Traffic Cost	326
<i>Xin Su, Xuchong Liu, Jiuchuan Lin, and Yu Tong</i>	
A Virtual Grid-Based Routing Protocol for Mobile Sink-Based WSNs.	339
<i>Qi Liu, Weixin Bu, Kai Zhang, Xiaodong Liu, and Nigel Linge</i>	
Low-Energy Security-Enhanced Routing Protocol Based on DBSCAN Partition	349
<i>Yating Hou, Feng Xu, and Ruilin Ding</i>	
Power Consuming Activity Recognition in Home Environment.	361
<i>Xiaodong Liu and Qi Liu</i>	
A Pre-partition Based Uneven Clustering Multi-hop Routing Protocol	373
<i>Yating Hou, Feng Xu, Mingming Su, and Kaibo Yu</i>	
A Credibility Evaluation Method in Opportunistic Networks.	385
<i>Jinxia Dou, Wenbin Yao, and Dongbin Wang</i>	
Unsupervised Energy Disaggregation of Home Appliances.	398
<i>Kondwani M. Kamoto, Qi Liu, and Xiaodong Liu</i>	
Planar-Based Visual Positioning for a Mobile Robot with Monocular Vision	410
<i>Yang Guo, Zheng Xiao, Hui Chen, and Ling Huang</i>	
Energy Efficient MAC Protocol for Wireless Sensor Networks: A Survey . . .	422
<i>Zichun Wang, Meng Feng, Tiantian Miao, Wei Jiang, and Jian Shen</i>	

A Particle Swarm Optimization and Mutation Operator Based Node Deployment Strategy for WSNs	430
<i>Jin Wang, Chunwei Ju, Huan Ji, Geumran Youn, and Jeong-Uk Kim</i>	
A Distributed Sparse Signal Reconstruction Algorithm in Wireless Sensor Network	438
<i>Zhi Zhao, Peng Pin, and WeiYu Yu</i>	
An Energy-Efficiency Routing Scheme Based on Clusters with a Mobile Sink for WSNs	450
<i>Xiaodong Liu and Qi Liu</i>	
Energy-Efficient Power Control and Resource Allocation for D2D Communications in Underlying Cellular Networks	460
<i>Xiaoxiao Guan, Xiangping Zhai, Jiabin Yuan, and Hu Liu</i>	
Virtual Machine Placement Based on Metaheuristic for IoT Cloud	472
<i>Shih-Yun Huang, Chen-Chi Liao, Yao-Chung Chang, and Han-Chieh Chao</i>	
A Novel Kalman Filter Based NLOS Localization Method for Wireless Sensor Networks	483
<i>Long Cheng, Yuchao Shao, and Yan Wang</i>	
An Improved Localization Algorithm for Anisotropic Sensor Networks	495
<i>Xiaoyong Yan, Zhong Yang, Yu Liu, Zhong Su, and Huijun Li</i>	
Further Results on Finite-Time Stability of Switched Static Neural Networks	508
<i>Zhihua Diao, Chunying Diao, Xiaoliang Qian, and Yuanyuan Wu</i>	
An Improved Artificial Immune Network Based on the Secondary Immune Mechanism for Data Clustering	519
<i>Yangyang Li, Xiaoju Hou, Licheng Jiao, and Yu Xue</i>	
Analysis of User's Abnormal Behavior Based on Behavior Sequence in Enterprise Network	531
<i>Haichao Guan, Huakang Li, and Guozi Sun</i>	
An Efficient Speeding up Algorithm of Frobenius Based Scalar Multiplication on Koblitz Curves for Cloud Computing	542
<i>Yunqi Dou, Chuangui Ma, Yanbin Li, and Fushan Wei</i>	
Consensus of Multi-agent Systems with State Constraints.	552
<i>Qingling Wang</i>	
Author Index	561