

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 · Alex Liu
Han-Chieh Chao · Elisa Bertino (Eds.)

Cloud Computing and Security

Second International Conference, ICCCS 2016
Nanjing, China, July 29–31, 2016
Revised Selected Papers, Part II

Editors

Xingming Sun
University of Information Science and
Technology
Nanjing
China

Alex Liu
Michigan State University
East Lansing, MI
USA

Han-Chieh Chao
National Dong Hwa University
Shoufeng
Taiwan

Elisa Bertino
Purdue University
West Lafayette, IN
USA

ISSN 0302-9743

ISSN 1611-3349 (electronic)

Lecture Notes in Computer Science

ISBN 978-3-319-48673-4

ISBN 978-3-319-48674-1 (eBook)

DOI 10.1007/978-3-319-48674-1

Library of Congress Control Number: 2016955502

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

© Springer International Publishing AG 2016

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.

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

This volume contains the papers presented at ICCCS 2016: the Second International Conference on Cloud Computing and Security held during July 29–31, 2016, 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 from research, development, and applications in the field of cloud computing and information security. This year we received more than 270 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 of three reviews. The committee decided to accept 97 papers.

The program also included ten distinguished talks: “A Bacteria-Inspired Solution for 5G Mobile Communication” by Prof. Han-Chieh Chao, National Dong Hwa University, Taiwan; “Flow-Net Accountable Logging and Applications” by Dr. Yang Xiao, University of Alabama, USA; “Security and Privacy in Cloud Computing: Challenges and Opportunities” by Prof. Yang Xiang, Deakin University, Australia; “Internet of Vehicles: When Cloud Computing Meets Intelligent Transport Systems” by Prof. Yan Zhang, Simula Research Laboratory and University of Oslo, Norway; “Children’s Privacy Protection Engine for Smart Anthropomorphic Toys” by Prof. Patrick C. K. Hung, University of Ontario Institute of Technology (UOIT), Canada; “Bioinformatics and Cloud Computing” by Dr. Zemin Ning, Wellcome Trust Sanger Institute, UK; “Towards Smart and Secure Connected Health” by Dr. Honggang Wang, University of Massachusetts Dartmouth, USA; “Semantic Searchover Encrypted Cloud Data” by Dr. Zhangjie Fu, Nanjing University of Information Science and Technology, China; “Coverless Information Hiding Method Based on the Text Big Data” by Dr. Xianyi Chen, Nanjing University of Information Science and Technology, China.

We would like to extend our sincere thanks to all authors who submitted papers to ICCCS 2016, and 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.

July 2016

Xingming Sun
Alex Liu
Han-Chieh Chao
Elisa Bertino

Organization

General Chairs

Xingming Sun	Nanjing University of Information Science and Technology, China
Alex Liu	Michigan State University, USA
Han-Chieh Chao	National Dong Hwa University, Taiwan
Elisa Bertino	University of Purdue, USA

Technical Program Committee Chairs

Chin-Feng Lai	National Chung Cheng University, Taiwan
Yang Xiao	University of Alabama, USA
Yun Q. Shi	New Jersey Institute of Technology, USA
Jian Shen	Nanjing University of Information Science and Technology, China

Technical Program Committee

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
Mohammad Mehedi Hassan	King Saud University, Saudi Arabia
Debiao He	Wuhan University, China
Wien Hong	Nanfang 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

Sungyoung Lee	Kyung Hee University, South Korea
Jiguo Li	Hohai University, China
Kuan-Ching Li	Providence University, Taiwan, China
Xiangyang Li	Illinois Institute of Technology, USA
Yangming Li	University of Washington, USA
Quansheng Liu	University of South Brittany, France
Zhe Liu	University of Waterloo, Canada
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	University of Greenwich, UK
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	Colorado Technical 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

Organizing Committee Chairs

Chih-Hsien Hsia	Chinese Culture University, Taiwan
Yingtao Jiang	University of Nevada at Las Vegas, USA
Eric Wong	University of Texas at Dallas, USA
Zhangjie Fu	Nanjing University of Information Science and Technology, China

Organizing Committee

Xianyi Chen	Nanjing University of Information Science and Technology, China
Zhiguo Qu	Nanjing University of Information Science and Technology, China
Zhaoqing Pan	Nanjing University of Information Science and Technology, China
Yan Kong	Nanjing University of Information Science and Technology, China
Zhili Zhou	Nanjing University of Information Science and Technology, China
Baowei Wang	Nanjing University of Information Science and Technology, China
Zhihua Xia	Nanjing University of Information Science and Technology, China

Contents – Part II

IOT Applications

A Lifetime-Aware Network Maintenance Method for Wireless Sensor Networks	3
<i>Long Cheng, Yan Wang, Hao Chu, and Qilin Wan</i>	
An Efficient Task Assignment Mechanism for Crowdsensing Systems	14
<i>Zhuan Shi, He Huang, Yu-E Sun, Xiaocan Wu, Fanzhang Li, and Miaomiao Tian</i>	
FPAP: Fast Pre-distribution Authentication Protocol for V2I.	25
<i>Wei Guo, Yining Liu, and Jing Wang</i>	
CACA-UAN: A Context-Aware Communication Approach Based on the Underwater Acoustic Sensor Network	37
<i>Qi Liu, Xuedong Chen, Xiaodong Liu, and Nigel Linge</i>	
Combating TNTL: Non-Technical Loss Fraud Targeting Time-Based Pricing in Smart Grid	48
<i>Wenlin Han and Yang Xiao</i>	
Social Influence Analysis Based on Modeling Interactions in Dynamic Social Networks: A Case Study	58
<i>Liwei Huang, Yutao Ma, and Yanbo Liu</i>	
Automated Vulnerability Modeling and Verification for Penetration Testing Using Petri Nets	71
<i>Junchao Luan, Jian Wang, and Mingfu Xue</i>	
Bandwidth Forecasting for Power Communication Using Adaptive Extreme Learning Machine.	83
<i>Zheng Zheng, Li Di, Song Wang, Min Xia, Kai Hu, and Ruidong Zhang</i>	
Narhil: Push the Limit of Cross Technology Coexistence for Interfered Preambles.	92
<i>Ping Li, Panlong Yang, Yubo Yan, Lei Shi, Maotian Zhang, Wanru Xu, and Xunpeng Rao</i>	
VANET 2.0: Integrating Visible Light with Radio Frequency Communications for Safety Applications	105
<i>Yao Ji, Peng Yue, and Zongmin Cui</i>	

Temperature Error Correction Based on BP Neural Network in Meteorological Wireless Sensor Network	117
<i>Baowei Wang, Xiaodu Gu, Li Ma, and Shuangshuang Yan</i>	
An Energy-Efficient Data Gathering Based on Compressive Sensing	133
<i>Ke-Ming Tang, Hao Yang, Xin Qiu, and Lv-Qing Wu</i>	
Improving Data Credibility for Mobile Crowdsensing with Clustering and Logical Reasoning.	138
<i>Tongqing Zhou, Zhiping Cai, Yueyue Chen, and Ming Xu</i>	
PTOM: Profit Concerning and Truthful Online Spectrum Double Auction Mechanism.	151
<i>Bing Chen, Tianqi Zhou, Ping Fu, and Xiangping Zhai</i>	
Non-Technical Loss Fraud in Advanced Metering Infrastructure in Smart Grid	163
<i>Wenlin Han and Yang Xiao</i>	
Compressive Sensing Based on Energy-Efficient Communication	173
<i>Ke-Ming Tang, Hao Yang, Qin Liu, Chang-Ke Wang, and Xin Qiu</i>	
Energy-Efficient Data Collection Algorithms Based on Clustering for Mobility-Enabled Wireless Sensor Networks	180
<i>Jian Zhang, Jian Tang, and Fei Chen</i>	
The Optimal Trajectory Planning for UAV in UAV-aided Networks	192
<i>Quan Wang and Xiangmao Chang</i>	
Wi-Play: Robust Human Activity Recognition for Somatosensory Game Using Wi-Fi Signals	205
<i>Xiaoxiao Cao, Bing Chen, and Yanchao Zhao</i>	
A Glance of Child's Play Privacy in Smart Toys	217
<i>Patrick C.K. Hung, Farkhund Iqbal, Shih-Chia Huang, Mohammed Melaisi, and Kevin Pang</i>	
Grid Routing: An Energy-Efficient Routing Protocol for WSNs with Single Mobile Sink	232
<i>Qi Liu, Kai Zhang, Xiaodong Liu, and Nigel Linge</i>	
A Method for Electric Load Data Verification and Repair in Home Environment	244
<i>Qi Liu, Shengjun Li, Xiaodong Liu, and Nigel Linge</i>	
An Introduction of Non-intrusive Load Monitoring and Its Challenges in System Framework	254
<i>Qi Liu, Min Lu, Xiaodong Liu, and Nigel Linge</i>	

A Survey on the Research of Indoor RFID Positioning System.	264
<i>Jian Shen, Chen Jin, and Dengzhi Liu</i>	
A RFID Based Localization Algorithm for Wireless Sensor Networks	275
<i>Jian Shen, Anxi Wang, Chen Wang, Yongjun Ren, and Xingming Sun</i>	

Multimedia Applications

SA-Based Multimedia Conversion System for Multi-users Environment.	289
<i>Hsin-Hung Cho, Fan-Hsun Tseng, Timothy K. Shih, Li-Der Chou, and Han-Chieh Chao</i>	
Color Image Quality Assessment with Quaternion Moments.	301
<i>Wei Zhang, Bo Hu, Zhao Xu, and Leida Li</i>	
Data Aggregation and Analysis: A Fast Algorithm of ECG Recognition Based on Pattern Matching.	313
<i>Miaomiao Zhang and Dechang Pi</i>	
Original Image Tracing with Image Relational Graph for Near-Duplicate Image Elimination.	324
<i>Fang Huang, Zhili Zhou, Tianliang Liu, and Xiya Liu</i>	
Hierarchical Joint CNN-Based Models for Fine-Grained Cars Recognition . . .	337
<i>Maolin Liu, Chengyue Yu, Hefei Ling, and Jie Lei</i>	
Towards Interest-Based Group Recommendation for Cultural Resource Sharing	348
<i>Jing Zhou, Weifeng Xie, and Chen Zhang</i>	
Human Facial Expression Recognition Based on 3D Cuboids and Improved K-means Clustering Algorithm	358
<i>Yun Yang, Borui Yang, Wei Wei, and Baochang Zhang</i>	

Multimedia Security and Forensics

Palmprint Matching by Minutiae and Ridge Distance.	371
<i>Jiali Chen and Zhenhua Guo</i>	
Anomaly Detection Algorithm for Helicopter Rotor Based on STFT and SVDD.	383
<i>Yun He and Dechang Pi</i>	
A Novel Self-adaptive Quantum Steganography Based on Quantum Image and Quantum Watermark	394
<i>Zhiguo Qu, Huangxing He, and Songya Ma</i>	

Rotation Invariant Local Binary Pattern for Blind Detection of Copy-Move Forgery with Affine Transform	404
<i>Pei Yang, Gaobo Yang, and Dengyong Zhang</i>	
An Efficient Passive Authentication Scheme for Copy-Move Forgery Based on DCT	417
<i>Huan Wang, Hongxia Wang, and Canghong Shi</i>	
Audio Tampering Detection Based on Quantization Artifacts	430
<i>Biaoli Tao, Rangding Wang, Diqun Yan, Chao Jin, Yanan Chen, and Li Zhang</i>	
Improvement of Image Universal Blind Detection Based on Training Set Construction	440
<i>Min Lei, Huaifeng Duan, Chunru Zhou, Huihua Wang, and Yin Li</i>	
An Efficient Forensic Method Based on High-speed Corner Detection Technique and SIFT Descriptor	450
<i>Bin Yang and Honglei Guo</i>	
Analysis of Topic Evolution on News Comments Based on Word Vectors . . .	464
<i>Lin Jianghao, Zhou Yongmei, Yang Aimin, and Chen Jin</i>	
A Secure JPEG Image Retrieval Method in Cloud Environment	476
<i>Wei Han, Yanyan Xu, and Jiaying Gong</i>	
Photon-Counting Double-Random-Phase Image Authentication in the Fresnel Domain	487
<i>Faliu Yi</i>	
New Conjugate Gradient Algorithms Based on New Conjugacy Condition . . .	498
<i>Gonglin Yuan and Gaohui Peng</i>	
LS-SVM-Based Prediction Model of Tread Wear Optimized by PSO-GA-LM	510
<i>Sha Hua, Jiabin Yuan, and Weijie Ding</i>	
A Hybrid Firefly Algorithm for Continuous Optimization Problems.	522
<i>Wenjun Wang, Hui Wang, Hui Sun, Xiang Yu, Jia Zhao, Yun Wang, Yunhui Zhang, Jinyong Zheng, Yueping Lu, Qianya Chen, Chuanbo Han, and Haoping Xie</i>	
A Particle Swarm Optimization with an Improved Updating Strategy.	532
<i>Zheng Fu, Haidong Hu, Chuangye Wang, and Hao Gao</i>	
A Manifold Learning Algorithm Based on Incremental Tangent Space Alignment.	541
<i>Chao Tan and Genlin Ji</i>	

Learning Based K-Dependence Bayesian Classifiers	553
<i>Limin Wang, Yuanxiang Xie, Huisi Zhou, Yiming Wang, and Jiangshan Guo</i>	
Scale Invariant Kernelized Correlation Filter Based on Gaussian Output	567
<i>Xiangbo Su, Baochang Zhang, Linlin Yang, Zhigang Li, and Yun Yang</i>	
A Novel Selective Ensemble Learning Based on K-means and Negative Correlation	578
<i>Liu Liu, Baosheng Wang, Bo Yu, and Qiuxi Zhong</i>	
Real-Time Aircraft Noise Detection Based on Large-Scale Noise Data.	589
<i>Wei jie Ding, Jiabin Yuan, and Sha Hua</i>	
Chinese Sentiment Analysis Using Bidirectional LSTM with Word Embedding.	601
<i>Zheng Xiao and PiJun Liang</i>	
Domain Adaptation with Active Learning for Named Entity Recognition	611
<i>Huiyu Sun, Ralph Grishman, and Yingchao Wang</i>	
An Empirical Study and Comparison for Tweet Sentiment Analysis	623
<i>Leiming Yan and Hao Tao</i>	
Author Index	633

Contents – Part I

Information Hiding

A Blind Image Watermarking Algorithm in the Combine Domain.	3
<i>Qingtang Su</i>	
Reversible Contrast Enhancement	18
<i>Zhenxing Qian, Xinpeng Zhang, Weiming Zhang, and Yimin Wang</i>	
On Improving Homomorphic Encryption-Based Reversible Data Hiding	28
<i>Xiaotian Wu, Zhuoqian Liang, Bing Chen, and Tong Liu</i>	
Coverless Information Hiding Method Based on Multi-keywords	39
<i>Zhili Zhou, Yan Mu, Ningsheng Zhao, Q.M. Jonathan Wu, and Ching-Nung Yang</i>	
Reversible Data Hiding with Low Bit-Rate Growth in H.264/AVC Compressed Video by Adaptive Hybrid Coding	48
<i>Tian-Qi Wang, Hong-Xia Wang, and Yue Li</i>	
An Information Hiding Algorithm for HEVC Based on Differences of Intra Prediction Modes.	63
<i>Qi Sheng, Rangding Wang, Anshan Pei, and Bin Wang</i>	
Improvement of Universal Steganalysis Based on SPAM and Feature Optimization	75
<i>Lei Min, LiuXiao Ming, Yang Xue, Yang Yu, and Wang Mian</i>	
Optimizing Feature for JPEG Steganalysis via Gabor Filter and Co-occurrences Matrices	84
<i>Bing Cao, Guorui Feng, and Zhaoxia Yin</i>	
Improved Separable Reversible Data Hiding in Encrypted Image Based on Neighborhood Prediction	94
<i>Shu Yan, Fan Chen, and Hongjie He</i>	
Fragile Watermarking with Self-recovery Capability via Absolute Moment Block Truncation Coding	104
<i>Ping Ji, Chuan Qin, and Zhenjun Tang</i>	
Schur Decomposition Based Robust Watermarking Algorithm in Contourlet Domain	114
<i>Junxiang Wang and Ying Liu</i>	

Improved Uniform Embedding for Efficient JPEG Steganography	125
<i>Yuanfeng Pan, Jiangqun Ni, and Wenkang Su</i>	
A Tunable Bound of the Embedding Level for Reversible Data Hiding with Contrast Enhancement	134
<i>Haishan Chen, Wien Hong, Jiangqun Ni, and Junying Yuan</i>	
Coverless Text Information Hiding Method Based on the Word Rank Map . . .	145
<i>Jianjun Zhang, Jun Shen, Lucai Wang, and Haijun Lin</i>	
A Phishing Webpage Detecting Algorithm Using Webpage Noise and N-Gram	156
<i>Qiong Deng, Huaqun Huang, Liangmin Pan, Shuang Pang, and Jiaohua Qin</i>	
A Construction Scheme of Steganographic Codes Based on Matrix Unwrapping.	166
<i>Weiwei Liu, Guangjie Liu, Jiangtao Zhai, and Yuewei Dai</i>	
A Technique of High Embedding Rate Text Steganography Based on Whole Poetry of Song Dynasty	178
<i>Yanchen Liu, Jian Wang, Zhibin Wang, Qifeng Qu, and Shun Yu</i>	
Cloud Computing	
Multi-objective Ant Colony Optimization Algorithm Based on Load Balance.	193
<i>Liwen Zhu, Ruichun Tang, Ye Tao, Meiling Ren, and Lulu Xue</i>	
A Novel Spatio-Temporal Data Storage and Index Method for ARM-Based Hadoop Server	206
<i>Laipeng Han, Lan Huang, Xueyi Yang, Wei Pang, and Kangping Wang</i>	
An Efficient Hierarchical Comparison Mechanism for Cloud-Based Heterogeneous Product Lifecycle Management Systems	217
<i>Mikayla Cohen and Yanzen Qu</i>	
Automatic Classification of Cloud Service Based on Weighted Euclidean Distance	229
<i>Yanqiu Lou, Yi Zhuang, and Ying Huo</i>	
A Conflict Prevention Scheduling Strategy for Shared-State Scheduling in Large Scale Cluster	240
<i>Libo He, Zhenping Qiang, Lin Liu, Wei Zhou, and Shaowen Yao</i>	
Design and Performance Comparison of Modular Multipliers Implemented on FPGA Platform	251
<i>Khalid Javeed, Daniel Irwin, and Xiaojun Wang</i>	

Cloud-Based Video Surveillance System Using EFD-GMM for Object Detection	261
<i>Ce Li, Jianchen Su, and Baochang Zhang</i>	
Enhanced Edge Detection Technique for Satellite Images.	273
<i>Renu Gupta</i>	
Phone Call Detection Based on Smartphone Sensor Data	284
<i>Huiyu Sun and Suzanne McIntosh</i>	
A Survey of Speculative Execution Strategy in MapReduce	296
<i>Qi Liu, Dandan Jin, Xiaodong Liu, and Nigel Linge</i>	
Cloud Security	
Cryptanalysis and Improvement of a Smart Card Based Mutual Authentication Scheme in Cloud Computing.	311
<i>Qi Jiang, Bingyan Li, Jianfeng Ma, Youliang Tian, and Yuanyuan Yang</i>	
Another SPA Key Recovery Against Random Order Countermeasures for AES Key Expansion.	322
<i>Mengting Chen, Yang Li, and Jian Wang</i>	
A Note on “IPad: ID-Based Public Auditing for the Outsourced Data in the Standard Model”	335
<i>Wenting Shen, Jia Yu, Hui Xia, and Rong Hao</i>	
Supervised Nonlinear Latent Feature Extraction and Regularized Random Weights Neural Network Modeling for Intrusion Detection System	343
<i>Jian Tang, Liu Zhuo, Meiyong Jia, Chunlai Sun, and Chaowen Shi</i>	
A Revocable Certificateless Signature Scheme Without Pairing.	355
<i>Yinxia Sun, Zhuoran Zhang, and Limin Shen</i>	
Privacy Protection of Digital Speech Based on Homomorphic Encryption . . .	365
<i>Canghong Shi, Hongxia Wang, Qing Qian, and Huan Wang</i>	
Two Factor Authenticated Key Exchange Protocol for Wireless Sensor Networks: Formal Model and Secure Construction	377
<i>Fushan Wei, Ruijie Zhang, and Chuangui Ma</i>	
Outsourced Data Modification Algorithm with Assistance of Multi-assistants in Cloud Computing	389
<i>Jian Shen, Jun Shen, Xiong Li, FuShan Wei, and JiGuo Li</i>	
Location Privacy Protected Recommendation System in Mobile Cloud	409
<i>Haiyan Guan, Hongyan Qian, and Yanchao Zhao</i>	

An Extended Chaotic Maps Based Authenticated Key Agreement Protocol
Without Using Password 421
Xiong Li, Junguo Liao, Wei Liang, and Jingqiang Zhao

A Privacy-Preserving Online Reverse Multi-attributes Auction
Scheme Based on Degree-Matching. 432
Mingfan Ma, Jun Gao, Ning Lu, and Wenbo Shi

TransPro: Mandatory Sensitive Information Protection Based
on Virtualization and Encryption. 443
Xue-Zhi Xie, Hu-Qiu Liu, and Yu-Ping Wang

Key Recovery in Public Clouds: A Survey on Cross-VM Side Channel
Attacks 456
Stelvio Cimato, Ernesto Damiani, Silvia Mella, and Ching-Nung Yang

An Outsourcing Data Storage Scheme Supporting Privacy Preserving
and Data Hiding Based on Digital Watermarking 468
Zhangjie Fu and Xinyue Cao

Distributed Quantum Computation Assisted by Remote Toffoli Gate 475
Ming-Xing Luo and Hui-Ran Li

Author Index 487