

*Commenced Publication in 1973*

Founding and Former Series Editors:

Gerhard Goos, Juris Hartmanis, and Jan van Leeuwen

## Editorial Board

David Hutchison

*Lancaster University, UK*

Takeo Kanade

*Carnegie Mellon University, Pittsburgh, PA, USA*

Josef Kittler

*University of Surrey, Guildford, UK*

Jon M. Kleinberg

*Cornell University, Ithaca, NY, USA*

Alfred Kobsa

*University of California, Irvine, CA, USA*

Friedemann Mattern

*ETH Zurich, Switzerland*

John C. Mitchell

*Stanford University, CA, USA*

Moni Naor

*Weizmann Institute of Science, Rehovot, Israel*

Oscar Nierstrasz

*University of Bern, Switzerland*

C. Pandu Rangan

*Indian Institute of Technology, Madras, India*

Bernhard Steffen

*TU Dortmund University, Germany*

Madhu Sudan

*Microsoft Research, Cambridge, MA, USA*

Demetri Terzopoulos

*University of California, Los Angeles, CA, USA*

Doug Tygar

*University of California, Berkeley, CA, USA*

Gerhard Weikum

*Max Planck Institute for Informatics, Saarbruecken, Germany*

Khabib Mustofa Erich J. Neuhold  
A Min Tjoa Edgar Weippl Ilsun You (Eds.)

# Information and Communication Technology

International Conference, ICT-EurAsia 2013  
Yogyakarta, Indonesia, March 25-29, 2013  
Proceedings



Springer

## Volume Editors

Khabib Mustofa

Universitas Gadjah Mada, Department of Computer Science and Electronics  
Sekip Utara Bls, Yogyakarta 55281, Indonesia  
E-mail: khabib@ugm.ac.id

Erich J. Neuhold

University of Vienna, Faculty of Computer Science  
Währinger Straße 29, 1190 Wien, Austria  
E-mail: erich.neuhold@univie.ac.at

A Min Tjoa

Vienna University of Technology  
Institute of Software Technology and Interactive Systems  
Favoritenstraße 9-11, 1040 Wien, Austria  
E-mail: amin@ifs.tuwien.ac.at

Edgar Weippl

Vienna University of Technology and SBA Research  
Institute of Software Technology and Interactive Systems  
Favoritenstraße 9-11, 1040 Wien, Austria  
E-mail: edgar.weippl@tuwien.ac.at

Ilsun You

Korean Bible University, School of Informatic Science  
16 Danghyun 2-gil, Nowon-gu, Seoul 139-791, South Korea  
E-mail: isyou@bible.ac.kr

ISSN 0302-9743

e-ISSN 1611-3349

ISBN 978-3-642-36817-2

e-ISBN 978-3-642-36818-9

DOI 10.1007/978-3-642-36818-9

Springer Heidelberg Dordrecht London New York

Library of Congress Control Number: 2013931976

CR Subject Classification (1998): K.4.1-4, K.6.5, H.3.4-5, H.4.1-3, H.5.1, H.5.3, E.3, K.3.1, C.2.0-5, D.2.0, I.2.7, D.2.4, C.5.3

LNCS Sublibrary: SL 3 – Information Systems and Application, incl. Internet/Web and HCI

© Springer-Verlag Berlin Heidelberg 2013

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, re-use of illustrations, recitation, broadcasting, reproduction on microfilms or in any other way, and storage in data banks. Duplication of this publication or parts thereof is permitted only under the provisions of the German Copyright Law of September 9, 1965, in its current version, and permission for use must always be obtained from Springer. Violations are liable to prosecution under the German Copyright Law.

The use of general descriptive names, registered names, trademarks, 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.

*Typesetting:* Camera-ready by author, data conversion by Scientific Publishing Services, Chennai, India

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

# Preface

The ICT-EurAsia conference is thought as a platform for the exchange of ideas, experiences, and opinions among theoreticians and practitioners and for defining requirements of future systems in the area of ICT with a special focus on fostering long-term relationships among and with researchers and leading organizations in the Eurasian continent.

On the one hand, organizing cross-domain scientific events like this originated from an idea of IFIP President Leon Strous at the IFIP 2010 World Computer Congress in Brisbane and, on the other hand, by the many activities of the ASEA-UNINET (ASEAN-European Academic University Network) in the area. This network was founded in 1994 especially to enhance scientific and research cooperation between ASEAN countries and Europe. The great success of ASEA-UNINET led to the foundation of the EPU network (Eurasia Pacific University Network), which complements the geographic area of ASEA-UNINET covering the whole Eurasian continent. Both university networks have a strong focus on ICT.

The IFIP organizers of this event who are engaged within IFIP in the area of TC 5 (IT Applications) and TC 8 (Information Systems) also very much welcome the fertilization of this event by the collocation of AsiaARES as a special track on availability, reliability, and security. AsiaARES brings the idea of seven successful consecutive ARES conferences to Asia. ARES is devoted to building scientific bridges between the various aspects of system dependability and security as an integrated concept.

AsiaARES is a new conference track that specifically aims to provide better access to current IT-security research results for the Asian region. The ultimate goal is to establish a community and a meeting point for security researchers and professionals and to make travel shorter and the venues easily accessible for researchers from Asia. At AsiaARES we offer virtual presentations for which authors submit a video presentation in addition to their paper and the paper is discussed using online collaboration tools. This allows authors who have problems obtaining visas or very limited travel budgets to contribute.

We look forward to continuing the success of AsiaARES 2013 in further editions and improve AsiaARES based on the feedback of the authors and attendees – both virtual and real. Special thanks to Ilsun You for all his efforts toward this initiative.

We would like to express our thanks to all institutions actively supporting this event, namely:

- University Gadjah Mada, Yogyakarta, Indonesia
- International Federation for Information Processing (IFIP)
- ASEAN-European University Network
- Eurasia-Pacific University Network

- The Austrian Competence Centres for Excellent Technology SBA (Secure Business Austria)
- The Austrian Agency for International Cooperation in Education and Research
- The Austrian Embassy in Jakarta and Its Honorary Consulate in Yogyakarta

The papers presented at this conference were selected after extensive reviews by the Program Committee (PC) and associated reviewers. We would like to thank all the PC members and the reviewers for their valuable advice, and the authors for their contributions.

Many persons contributed numerous hours to organize this conference. Their names appear on the following pages as committee members of this scientific conference.

Special thanks go to Amin Anjomshoaa, Ahmad Ashari, Muhammad Asfand-E-Yar, and last but not least to Yvonne Poul.

January 2013

Khabib Mustofa  
Erich J. Neuhold  
A Min Tjoa  
Edgar Weippl  
Ilsun You

# Organization

## *Information & Communication Technology-EurAsia Conference 2013, ICT-EurAsia 2013*

### Honorary Committee

Abudul Jalil Nordin	Chairman of ASEA-UNINET
Atta Ur Rahman	President of the Academy of Science, Pakistan
Maria Raffai	Honorary Secretary IFIP
Roland Wagner	President of DEXA, Database and Expert Systems Association
Brigitte Winklehner	President EurAsia Pacific UNINET, EPU
Richardus Eko Indrajit	Chairman of APTIKOM, Association of Indonesian Universities on Informatics and Computer

### General Chairs

Stephane Bressan	National University of Singapore, Singapore
Erich J. Neuhold	Chairman of IFIP Technical Committee on Information Technology Application

### Program Committee Chairs

Ladjel Bellatreche	Laboratoire d'Informatique Scientifique et Industrielle, France
Alfredo Cuzzocrea	University of Calabria, Italy
Tran Khanh Dang	National University of Ho Chi Minh City, Vietnam
Mukesh Mohania	IBM Research India
Zhiyong Peng	Wuhan University, China
A Min Tjoa	Vienna University of Technology, Austria

### Workshop Chairs

Andreas Holzinger	University of Graz, Austria
Ilseun You	Korean Bible University, South Korea

### Panel Chairs

Inggriani Liem	ITB-Institute of Technology Bandung, Indonesia
Josef Küng	University of Linz, Austria
Lida Xu	Old Dominion University, USA

## Organizing Committee

Saiful Akbar	Institute of Technology Bandung, Bandung
Ahmad Ashari	Universitas Gadjah Mada, Yogyakarta
Harno Dwi Pranowo	Universitas Gadjah Mada, Yogyakarta
M. Isa Irawan	Institute of Technology Sepuluh November, Surabaya
Khabib Mustofa	Universitas Gadjah Mada, Yogyakarta
Mardhani Riassetiawan	Universitas Gadjah Mada, Yogyakarta
Insap Santosa	Universitas Gadjah Mada, Yogyakarta
Widyawan	Universitas Gadjah Mada, Yogyakarta

## Steering Committee

Masatoshi Arikawa	University of Tokyo, Japan
Wichian Chutimaskul	King Mongkut's University of Technology Thonburi, Thailand
Zainal A. Hasibuan	Universitas Indonesia, Indonesia
Hoang Huu Hanh	University of Hue, Vietnam
Jazi Eko Istiyanto	Universitas Gadjah Mada, Indonesia
Josef Küng	University of Linz, Austria
Ismail Khalil	Int. Org. for Information Integration and Web-based App. & Services
Inggriani Liem	Institute of Technology Bandung, Indonesia
Made Sudiana Mahendra	Udayana University, Indonesia
Pavol Navrat	Slovak University of Technology Bratislava, Slowakia
Günther Pernul	University of Regensburg, Germany
Maria Raffai	University of Győr, Hungary
Sri Wahyuni	Universitas Gadjah Mada, Indonesia

## Organizational Coordination Chair

Muhammad Asfand-e-yar	Vienna University of Technology, Austria
-----------------------	--

## Senior Program Committee

Silvia Abrahao	University Politecnica de Valencia, Spain
Hamideh Afsarmanesh	University of Amsterdam, Netherlands
Masatoshi Arikawa	University of Tokyo, Japan
Hyerim Bae	Pusan National University, Korea
Sourav S. Bhowmick	Nanyang Technological University, Singapore
Nguyen Thah Binh	IIASA, Austria
Robert P. Biuk-Aghai	University of Macau, China

Manfred Broy	Technical University of Munich, Germany
Indra Budi	University of Indonesia, Indonesia
Gerhard Budin	University of Vienna, Austria
Somchai Chatvichienchai	University of Nagasaki, Japan
Key Sun Choi	KAIST, Korea
Stavros Christodoulakis	Technical University of Crete, Greece
Wichian Chutimaskul	KMUTT, Thailand
Hoang Xuan Dau	PTIT, Hanoi, Vietnam
Duong Anh Duc	University of Information Technology, Vietnam
Tetsuya Furukawa	University of Kyushu, Japan
Andrzej Gospodarowicz	Wroclaw University of Economics, Poland
Zainal Hasibuan	University of Indonesia, Indonesia
Christian Huemer	Vienna University of Technology, Austria
Mizuho Iwaihara	Faculty of Science and Engineering Waseda University, Japan
Matthias Jarke	RWTH Aachen Lehrstuhl Informatik, Germany
Gerti Kappel	Vienna University of Technology, Austria
Dimitris Karagiannis	University of Vienna, Austria
Shuaib Karim	Quaid-i-Azam University, Pakistan
Sokratis Katsikas	University of Piraeus, Greece
Dieter Kranzlmüller	Ludwig-Maximilians-Universität München, Germany
Narayanan Kulathuramaiyer	Universiti Malaysia Sarawak, Malaysia
Josef Küng	Johannes Kepler Universität Linz, Austria
Khalid Latif	National University of Sciences and Technology, Pakistan
Lenka Lhotska	Czech Technical University, Czech Republic
Inggriani Liem	ITB-Institute of Technology Bandung, Indonesia
Peri Loucopoulos	Loughborough University, UK
Vladimir Marik	Czech Technical University, Czech Republic
Luis M. Camarinha Matos	Universidade Nova de Lisboa, Portugal
Günter Müller	University of Freiburg, Germany
Thoai Nam	HCMC University of Technology, Vietnam
Günther Pernul	University of Regensburg, Germany
Geert Poels	Ghent University, Belgium
Gerald Quirchmayr	University of Vienna, Austria
Dana Indra Sensuse	University of Indonesia, Indonesia
Josaphat Tetuko Sri Sumantyo	Chiba University, Japan
Wikan Danar Sunindyo	Institute of Technology Bandung, Indonesia
Katsumi Tanaka	Kyoto University, Japan
Juan Trujillo	University of Alicante, Spain
Nguyen Tuan	Vietnam National University, Vietnam
Werner Winiwarter	University of Vienna, Austria



***The 2013 Asian Conference on Availability, Reliability  
and Security, AsiaARES 2013***

**Program Committee Chair**

Ilusun You                                      Korean Bible University, South Korea

**Program Committee**

Dong Seong Kim	University of Canterbury, New Zealand
Kyung-Hyune Rhee	Pukyong National University, Republic of Korea
Kangbin Yim	Soonchunhyang University, Republic of Korea
Qin Xin	University of the Faroe Islands, Denmark
Pandu Rangan	
Chandrasekaran	Indian Institute of Technology Madras, India
Shinsaku Kiyomoto	KDDI R&D Laboratories Inc., Japan
Atsuko Miyaji	JAIST, Japan
Willy Susilo	University of Wollongong, Australia
Xiaofeng Chen	Xidian University, China
Shuichiroh Yamamoto	Nagoya University, Japan
Fanguo Zhang	Sun Yan-Sen Univerisity, China
Xinyi Huang	Fujian Normal University, China
Qianhong Wu	Universitat Rovira i Virgili, Spain
Zhang Jie	Nanyang Technological University, Singapore
Rana Barua	Indian Statistical Institute, India
Baokang Zhao	National University of Defense Technology, China
Joonsang Baek	Khalifa University of Science, Technology & Research, Kustar, UAE
Fang-Yie Leu	Tunghai University, Taiwan
Francesco Palmieri	Seconda Università di Napoli, Italy
Aniello Castiglione	Università degli Studi di Salerno, Italy
Ugo Fiore	Seconda Università di Napoli, Italy
Kouichi Sakurai	Kyushu University, Japan
Yizhi Ren	Hangzhou Dianzi University, China
Sushmita Ruje	Indian Institute of Technology, IIT-Indore, India
Kirill Morozov	Kyushu University, Japan
Chunhua Su	Institute for Infocomm Research, Singapore
Ren Junn Hwang	Tamkang University, Taiwan
Shiuh-Jeng Wang	Central Police University, Taiwan

# Table of Contents

## *Information and Communication Technology- Eurasia Conference (ICT-EurAsia)*

### **E-Society**

Translating the Idea of the eGovernment One-Stop-Shop in Indonesia . . . . .	1
<i>Fathul Wahid</i>	
A Practical Solution against Corrupted Parties and Coercers in Electronic Voting Protocol over the Network . . . . .	11
<i>Thi Ai Thao Nguyen and Tran Khanh Dang</i>	
Early-Detection System for Cross-Language (Translated) Plagiarism . . . .	21
<i>Khabib Mustofa and Yosua Albert Sir</i>	
TransWiki: Supporting Translation Teaching . . . . .	31
<i>Robert P. Biuk-Aghai and Hari Venkatesan</i>	
Physicians' Adoption of Electronic Medical Records: Model Development Using Ability – Motivation - Opportunity Framework . . . . .	41
<i>Rajesri Govindaraju, Aulia F. Hadining, and Dissa R. Chandra</i>	

### **Software Engineering**

Software Development Methods in the Internet of Things . . . . .	50
<i>Selo Sulisty</i>	
SAT-Based Bounded Strong Satisfiability Checking of Reactive System Specifications . . . . .	60
<i>Masaya Shimakawa, Shigeki Hagihara, and Naoki Yonezaki</i>	
OSMF: A Framework for OSS Process Measurement . . . . .	71
<i>Wikan Danar Sunindyo and Fajar Juang Ekaputra</i>	
Analyzing Stability of Algorithmic Systems Using Algebraic Constructs . . . . .	81
<i>Susmit Bagchi</i>	
Algorithms of the Combination of Compiler Optimization Options for Automatic Performance Tuning . . . . .	91
<i>Suprpto and Retantyo Wardoyo</i>	

## Security and Privacy

On Efficient Processing of Complicated Cloaked Region for Location Privacy Aware Nearest-Neighbor Queries . . . . .	101
<i>Chan Nam Ngo and Tran Khanh Dang</i>	
Semantic-Aware Obfuscation for Location Privacy at Database Level . . .	111
<i>Thu Thi Bao Le and Tran Khanh Dang</i>	
Practical Construction of Face-Based Authentication Systems with Template Protection Using Secure Sketch . . . . .	121
<i>Tran Tri Dang, Quynh Chi Truong, and Tran Khanh Dang</i>	
CAPTCHA Suitable for Smartphones . . . . .	131
<i>Yusuke Tsuruta, Mayumi Takaya, and Akihiro Yamamura</i>	
Code Based KPD Scheme with Full Connectivity: Deterministic Merging . . . . .	141
<i>Pinaki Sarkar and Aritra Dhar</i>	

## Cloud and Internet Computing

Indonesian Digital Natives: ICT Usage Pattern Study across Different Age Groups . . . . .	152
<i>Neila Ramdhani and Wisnu Wiradhany</i>	
End-to-End Delay Performance for VoIP on LTE System in Access Network . . . . .	162
<i>Liang Shen Ng, Noraniah Abdul Aziz, and Tutut Herawan</i>	
Mobile Collaboration Technology in Engineering Asset Maintenance – What Technology, Organisation and People Approaches Are Required? . . . . .	173
<i>Faisal Syafar and Jing Gao</i>	
A Genetic Algorithm for Power-Aware Virtual Machine Allocation in Private Cloud . . . . .	183
<i>Quang-Hung Nguyen, Pham Dac Nien, Nguyen Hoai Nam, Nguyen Huynh Tuong, and Nam Thoai</i>	
Cloud-Based E-Learning: A Proposed Model and Benefits by Using E-Learning Based on Cloud Computing for Educational Institution . . . .	192
<i>Nungki Selviandro and Zainal Arifin Hasibuan</i>	

## Knowledge Management

Information Systems Strategic Planning for a Naval Hospital . . . . .	202
<i>Hery Harjono Muljo and Bens Pardamean</i>	

Estimation of Precipitable Water Vapor Using an Adaptive Neuro-fuzzy Inference System Technique .....	214
<i>Wayan Suparta and Kemal Maulana Alhasa</i>	
A Data-Driven Approach toward Building Dynamic Ontology.....	223
<i>Dhomas Hatta Fudholi, Wenny Rahayu, Eric Pardede, and Hendrik</i>	
Using Semantic Web to Enhance User Understandability for Online Shopping License Agreement .....	233
<i>Muhammad Asfand-e-yar and A Min Tjoa</i>	

### ***Asian Conference on Availability, Reliability and Security (AsiaARES)***

#### **Dependable Systems and Applications**

Secure and Verifiable Outsourcing of Sequence Comparisons .....	243
<i>Yansheng Feng, Hua Ma, Xiaofeng Chen, and Hui Zhu</i>	
Syntactic Analysis for Monitoring Personal Information Leakage on Social Network Services: A Case Study on Twitter .....	253
<i>Dongjin Choi, Ilsun You, and Pankoo Kim</i>	
On the Efficiency Modelling of Cryptographic Protocols by Means of the Quality of Protection Modelling Language (QoP-ML) .....	261
<i>Bogdan Ksiezopolski, Damian Rusinek, and Adam Wierzbicki</i>	
DiffSig: Resource Differentiation Based Malware Behavioral Concise Signature Generation .....	271
<i>Huabiao Lu, Baokang Zhao, Xiaofeng Wang, and Jinshu Su</i>	
On Identifying Proper Security Mechanisms .....	285
<i>Jakub Breier and Ladislav Hudec</i>	
A Recovery Approach for SQLite History Recorders from YAFFS2 .....	295
<i>Beibei Wu, Ming Xu, Haiping Zhang, Jian Xu, Yizhi Ren, and Ning Zheng</i>	
UVHM: Model Checking Based Formal Analysis Scheme for Hypervisors .....	300
<i>Yuchao She, Hui Li, and Hui Zhu</i>	
SA4WSs: A Security Architecture for Web Services .....	306
<i>Lingxia Liu, Dongxia Wang, Jinjing Zhao, and Minhuan Huang</i>	
Verifying Data Authenticity and Integrity in Server-Aided Confidential Forensic Investigation .....	312
<i>Shuhui Hou, Ryoichi Sasaki, Tetsutaro Uehara, and Siuming Yiu</i>	

A Test Case Generation Technique for VMM Fuzzing ..... 318  
*Xiaoxia Sun, Hua Chen, Jinjing Zhao, and Minhuan Huang*

A Variant of Non-Adaptive Group Testing and Its Application in  
Pay-Television via Internet ..... 324  
*Thach V. Bui, Oanh K. Nguyen, Van H. Dang,  
Nhung T.H. Nguyen, and Thuc D. Nguyen*

A Proposal on Security Case Based on Common Criteria ..... 331  
*Shuichiro Yamamoto, Tomoko Kaneko, and Hidehiko Tanaka*

An Adaptive Low-Overhead Mechanism for Dependable General-  
Purpose Many-Core Processors ..... 337  
*Wentao Jia, Rui Li, and Chunyan Zhang*

Identity Management Lifecycle - Exemplifying the Need for Holistic  
Identity Assurance Frameworks ..... 343  
*Jostein Jensen*

**Cryptography**

Anonymous Lattice-Based Broadcast Encryption ..... 353  
*Adela Georgescu*

Supporting Secure Provenance Update by Keeping “Provenance”  
of the Provenance ..... 363  
*Amril Syalim, Takashi Nishide, and Kouichi Sakurai*

New Ciphertext-Policy Attribute-Based Access Control with Efficient  
Revocation ..... 373  
*Xingxing Xie, Hua Ma, Jin Li, and Xiaofeng Chen*

Provably Secure and Subliminal-Free Variant of Schnorr Signature ..... 383  
*Yinghui Zhang, Hui Li, Xiaoping Li, and Hui Zhu*

A Block Cipher Mode of Operation with Two Keys ..... 392  
*Yi-Li Huang, Fang-Yie Leu, Jung-Chun Liu, and Jing-Hao Yang*

On the Security of an Authenticated Group Key Transfer Protocol  
Based on Secret Sharing ..... 399  
*Ruxandra F. Olimid*

Modified Efficient and Secure Dynamic ID-Based User Authentication  
Scheme ..... 409  
*Toan-Thinh Truong, Minh-Triet Tran, and Anh-Duc Duong*

## Privacy and Trust Management

A Simplified Privacy Preserving Message Delivery Protocol in VDTNs .....	416
<i>Youngho Park, Chul Sur, and Kyung-Hyune Rhee</i>	
Confidentiality-Preserving Query Execution of Fragmented Outsourced Data .....	426
<i>Anis Bkakria, Frédéric Cuppens, Nora Cuppens-Boulahia, and José M. Fernandez</i>	
Enhancing Privacy Protection in Distributed Environments through Identification and Authentication-Based Secure Data-Level Access Control .....	441
<i>Nisreen Alam Aldeen and Gerald Quirchmayr</i>	
Toward Secure Clustered Multi-Party Computation: A Privacy- Preserving Clustering Protocol .....	447
<i>Sedigheh Abbasi, Stelvio Cimato, and Ernesto Damiani</i>	
A Real-Time Privacy Amplification Scheme in Quantum Key Distribution .....	453
<i>Bo Liu, Bo Liu, Baokang Zhao, Dingjie Zou, Chunqing Wu, Wanrong Yu, and Ilsun You</i>	

## Network Analysis and Security

CSP-Based General Detection Model of Network Covert Storage Channels .....	459
<i>Hui Zhu, Tingting Liu, Guanghui Wei, Beishui Liu, and Hui Li</i>	
Trustworthy Opportunistic Access to the Internet of Services .....	469
<i>Alessandro Armando, Aniello Castiglione, Gabriele Costa, Ugo Fiore, Alessio Merlo, Luca Verderame, and Ilsun You</i>	
Architecture of Network Environment for High-Risk Security Experimentation .....	479
<i>Xiaohui Kuang, Xiang Li, and Jinjing Zhao</i>	
Emulation on the Internet Prefix Hijacking Attack Impaction .....	485
<i>Jinjing Zhao and Yan Wen</i>	
Improved Clustering for Intrusion Detection by Principal Component Analysis with Effective Noise Reduction .....	490
<i>Lu Zhao, Ho-Seok Kang, and Sung-Ryul Kim</i>	
Unconditionally Secure Fully Connected Key Establishment Using Deployment Knowledge .....	496
<i>Sarbari Mitra, Sourav Mukhopadhyay, and Ratna Dutta</i>	

An Improved Greedy Forwarding Routing Protocol for Cooperative VANETs..... 502  
*Huaqing Wen and Kyung-Hyune Rhee*

A Review of Security Attacks on the GSM Standard..... 507  
*Giuseppe Cattaneo, Giancarlo De Maio, Pompeo Faruolo, and Umberto Ferraro Petrillo*

**Multimedia Security**

An Extended Multi-secret Images Sharing Scheme Based on Boolean Operation..... 513  
*Huan Wang, Mingxing He, and Xiao Li*

Image Watermarking Using Psychovisual Threshold over the Edge ..... 519  
*Nur Azman Abu, Ferda Ernawan, Nanna Suryana, and Shahrin Sahib*

A Data Structure for Efficient Biometric Identification..... 528  
*Kensuke Baba and Serina Egawa*

The PCA-Based Long Distance Face Recognition Using Multiple Distance Training Images for Intelligent Surveillance System..... 534  
*Hae-Min Moon and Sung Bum Pan*

Shifting Primes on OpenRISC Processors with Hardware Multiplier .... 540  
*Leandro Marin, Antonio J. Jara, and Antonio Skarmeta*

**Author Index**..... 551