

# Contents

## Networks and System Architecture

Reducing Keepalive Traffic in Software-Defined Mobile Networks with Port Control Protocol . . . . .	3
<i>Kamil Burda, Martin Nagy, and Ivan Kotuliak</i>	
A SDN Based Method of TCP Connection Handover . . . . .	13
<i>Andrej Binder, Tomas Boros, and Ivan Kotuliak</i>	
IP Data Delivery in HBB-Next Network Architecture . . . . .	20
<i>Roman Bronis, Ivan Kotuliak, Tomas Kovacik, Peter Truchly, and Andrej Binder</i>	
Syn Flood Attack Detection and Type Distinguishing Mechanism Based on Counting Bloom Filter . . . . .	30
<i>Tomáš Halagan, Tomáš Kováčik, Peter Trúchly, and Andrej Binder</i>	
Integrating Mobile OpenFlow Based Network Architecture with Legacy Infrastructure . . . . .	40
<i>Martin Nagy, Ivan Kotuliak, Jan Skalny, Martin Kalcok, and Tibor Hirjak</i>	

## Teaching and Education

Making Computer Science Education Relevant . . . . .	53
<i>Michael Weigend</i>	
Analyzing Brain Waves for Activity Recognition of Learners . . . . .	64
<i>Hiromichi Abe, Kazuya Kinoshita, Kensuke Baba, Shigeru Takano, and Kazuaki Murakami</i>	

## Authentication and Profiling

A Multi-factor Biometric Based Remote Authentication Using Fuzzy Commitment and Non-invertible Transformation . . . . .	77
<i>Thi Ai Thao Nguyen, Dinh Thanh Nguyen, and Tran Khanh Dang</i>	
Profiler for Smartphone Users Interests Using Modified Hierarchical Agglomerative Clustering Algorithm Based on Browsing History . . . . .	89
<i>Priagung Khusumanegara, Rischan Mafrur, and Deokjai Choi</i>	

**Data Management and Information Advertising**

Strength of Relationship Between Multi-labeled Data and Labels . . . . .	99
<i>Masahiro Kuzunishi and Tetsuya Furukawa</i>	
Online Ad-fraud in Search Engine Advertising Campaigns: Prevention, Detection and Damage Limitation . . . . .	109
<i>Andreas Mladenow, Niina Maarit Novak, and Christine Strauss</i>	

**Applied Modeling and Simulation**

Markov Chain Solution to the 3-Tower Problem . . . . .	121
<i>Guido David</i>	
Fitness Function in ABC Algorithm for Uncapacitated Facility Location Problem . . . . .	129
<i>Yusuke Watanabe, Mayumi Takaya, and Akihiro Yamamura</i>	
Comparative Study of Monte-Carlo Tree Search and Alpha-Beta Pruning in Amazons . . . . .	139
<i>Hikari Kato, Szilárd Zsolt Fazekas, Mayumi Takaya, and Akihiro Yamamura</i>	

**Network Security**

Can We Securely Use CBC Mode in TLS1.0? . . . . .	151
<i>Takashi Kurokawa, Ryo Nojima, and Shiho Moriai</i>	
Key Agreement with Modified Batch Rekeying for Distributed Group in Cognitive Radio Networks . . . . .	161
<i>N. Renugadevi and C. Mala</i>	
Secure Mobility Management for MIPv6 with Identity-Based Cryptography . . .	173
<i>Nan Guo, Fangting Peng, and Tianhan Gao</i>	
Investigation of DDoS Attacks by Hybrid Simulation . . . . .	179
<i>Yana Bekeneva, Konstantin Borisenko, Andrey Shorov, and Igor Kotenko</i>	

**Dependable Systems and Applications**

Secure Database Using Order-Preserving Encryption Scheme Based on Arithmetic Coding and Noise Function . . . . .	193
<i>Sergey Krendelev, Mikhail Yakovlev, and Maria Usoltseva</i>	
An Approach for Evaluating Softgoals Using Weight . . . . .	203
<i>Shuichihiro Yamamoto</i>	

An Efficient Unsavory Data Detection Method for Internet Big Data . . . . .	213
<i>Peige Ren, Xiaofeng Wang, Hao Sun, Fen Xu, Baokang Zhao, and Chunqing Wu</i>	

Identification of Corrupted Cloud Storage in Batch Auditing for Multi-Cloud Environments . . . . .	221
<i>Sooyeon Shin, Seungyeon Kim, and Taekyoung Kwon</i>	

## Multimedia Security

Face Recognition Performance Comparison Between Real Faces and Pose Variant Face Images from Image Display Device . . . . .	229
<i>Mi-Young Cho and Young-Sook Jeong</i>	

A Lossless Data Hiding Strategy Based on Two-Dimensional Side-Match Predictions . . . . .	235
<i>Chi-Yao Weng, Sheng-Jie Wang, and Shiuh-Jeng Wang</i>	

Secure Image Deduplication in Cloud Storage . . . . .	243
<i>Han Gang, Hongyang Yan, and Lingling Xu</i>	

## Cryptography

Hybrid Encryption Scheme Using Terminal Fingerprint and Its Application to Attribute-Based Encryption Without Key Misuse. . . . .	255
<i>Chunlu Chen, Hiroaki Anada, Junpei Kawamoto, and Kouichi Sakurai</i>	

Differential Fault Attack on LEA . . . . .	265
<i>Dirmanto Jap and Jakub Breier</i>	

A Secure Multicast Key Agreement Scheme. . . . .	275
<i>Hsing-Chung Chen and Chung-Wei Chen</i>	

Efficient Almost Strongly Universal Hash Function for Quantum Key Distribution: Extended Abstract. . . . .	282
<i>Bo Liu, Baokang Zhao, Chunqing Wu, Wanrong Yu, and Ilsun You</i>	

## Big Data and Text Mining

DCODE: A Distributed Column-Oriented Database Engine for Big Data Analytics . . . . .	289
<i>Yanchen Liu, Fang Cao, Masood Mortazavi, Mengmeng Chen, Ning Yan, Chi Ku, Aniket Adnaik, Stephen Morgan, Guangyu Shi, Yuhu Wang, and Fan Fang</i>	

Incorporating Big Data Analytics into Enterprise Information Systems . . . . .	300
<i>Zhaohao Sun, Francisca Pambel, and Fangwei Wang</i>	

Analytical Platform Based on Jbowl Library Providing Text-Mining Services in Distributed Environment . . . . .	310
<i>Martin Sarnovský, Peter Butka, Peter Bednár, František Babič, and Ján Paralič</i>	
<b>Social Impact of EIS and Visualization</b>	
Corporate Social Responsibility in Social Media Environment . . . . .	323
<i>Antonín Pavlíček and Petr Doucek</i>	
Usage of Finance Information Systems in Developing Countries: Identifying Factors During Implementation that Impact Use . . . . .	333
<i>David Kiwana, Björn Johansson, and Sven Carlsson</i>	
Software Model Creation with Multidimensional UML . . . . .	343
<i>Lukáš Gregorovič, Ivan Polasek, and Branislav Sobota</i>	
<b>Author Index</b> . . . . .	353

Information and Communication Technology  
Third IFIP TC 5/8 International Conference, ICT-EurAsia  
2015, and 9th IFIP WG 8.9 Working Conference,  
CONFENIS 2015, Held as Part of WCC 2015, Daejeon,  
Korea, October 4-7, 2015, Proceedings  
Khalil, I.; Neuhold, E.; Tjoa, A.M.; Xu, L.D.; You, I. (Eds.)  
2015, XIV, 354 p. 119 illus. in color., Softcover  
ISBN: 978-3-319-24314-6