

Tran Khanh Dang · Roland Wagner
Josef Küng · Nam Thoai
Makoto Takizawa · Erich Neuhold (Eds.)

Future Data and Security Engineering

Third International Conference, FDSE 2016
Can Tho City, Vietnam, November 23–25, 2016
Proceedings

Contents

Big Data Analytics and Cloud Data Management

- Incorporating Trust, Certainty and Importance of Information into Knowledge Processing Systems – An Approach 3
Markus Jäger, Trong Nhan Phan, Christian Huber, and Josef Küng
- Incremental Parallel Support Vector Machines for Classifying Large-Scale Multi-class Image Datasets 20
Thanh-Nghi Do and Minh-Thu Tran-Nguyen
- A Machine Learning-Based Approach for Predicting the Execution Time of CFD Applications on Cloud Computing Environment 40
Duong Ngoc Hieu, Thai Tieu Minh, Trinh Van Quang, Bui Xuan Giang, and Tran Van Hoai
- TLCSim: A Large-Scale Two-Level Clustering Similarity Search with MapReduce. 53
Trong Nhan Phan, Markus Jäger, Stefan Nadschläger, Pablo Gómez-Pérez, Christian Huber, Josef Küng, and Cong An Nguyen

Internet of Things and Applications

- Immune Approach to the Protection of IoT Devices 75
Andrzej Chmielewski and Maciej Brzozowski
- Implementation and Performance Evaluation of Vehicle-Moving Based Routing Protocol in VANET. 93
Vo Que Son, Ta Tri Nghia, Nguyen Ho Ba Hai, and Nguyen Binh Phuong
- Heuristic-Guided Verification for Fast Congestion Detection on Wireless Sensor Networks. 105
Khanh Le, Toan Nguyen, Thanh Cao, Thang Bui, and Tho Quan

Security and Privacy Engineering

- Security Risk Management in the Aviation Turnaround Sector 119
Raimundas Matulevičius, Alex Norta, Chibozur Udokwu, and Rein Nõukas

Collective Anomaly Detection Based on Long Short-Term Memory Recurrent Neural Networks	141
<i>Loïc Bontemps, Van Loi Cao, James McDermott, and Nhien-An Le-Khac</i>	
A Novel Encryption Mechanism for Door Lock to Resist Jam-and-Relay Attack	153
<i>Bao An Tran and Viet-Hong Tran</i>	
Information and Identity Theft Without ARP Spoofing in LAN Environments	164
<i>Camilo Albarracin, Brayan S. Reyes Daza, and Octavio J. Salcedo Parra</i>	
Data Protection and Data Hiding	
A Watermarking Framework for Outsourced and Distributed Relational Databases	175
<i>Sapana Rani, Dileep Kumar Koshley, and Raju Halder</i>	
Face Quality Measure for Face Authentication	189
<i>Quynh Chi Truong, Tran Khanh Dang, and Trung Ha</i>	
Computer Virus Detection Method Using Feature Extraction of Specific Malicious Opcode Sets Combine with aiNet and Danger Theory	199
<i>Vu Thanh Nguyen, Cao Ngoc Tuan, Ly Tan Dung, Vo Minh Hai, and Toan Tan Nguyen</i>	
Using Graph Database for Evidence Correlation on Android Smartphones . . .	209
<i>Minh-Tuan Dang and Tuan A. Nguyen</i>	
Advances in Authentication and Data Access Control	
DASSR: A Distributed Authentication Scheme for Secure Routing in Wireless Ad-hoc Networks	219
<i>Phu H. Phung and Quang Tran Minh</i>	
A Secure Token-Based Communication for Authentication and Authorization Servers	237
<i>Jan Kubovy, Christian Huber, Markus Jäger, and Josef Küng</i>	
An Enhancement of the Rew-XAC Model for Workflow Data Access Control in Healthcare.	251
<i>Thanh Tien Nguyen, Nguyen Hoang Nam Pham, and Que Nguyet Tran Thi</i>	

Access Control in NoSQL and Big Data

ASASPXL: New Cloth for Analysing ARBAC Policies	267
<i>Anh Truong and Silvio Ranise</i>	
Trust and Risk-Based Access Control for Privacy Preserving Threat Detection Systems.	285
<i>Nadia Metoui, Michele Bezzi, and Alessandro Armando</i>	
Fine Grained Attribute Based Access Control Model for Privacy Protection . . .	305
<i>Que Nguyet Tran Thi, Tran The Si, and Tran Khanh Dang</i>	
A Supporting Automatically Mechanism for Data Owner Preventing Personal Privacy from Colluding Attack on Online Social Networks	317
<i>Nguyen Hoang Nam Pham, Thanh Tien Nguyen, and Thi Kim Tuyen Le</i>	

Context-Based Data Analysis and Applications

A Semantic Approach in Recommender Systems	331
<i>Huynh Thanh-Tai, Huu-Hoa Nguyen, and Nguyen Thai-Nghe</i>	
Automatic Extraction of Semantic Relations from Text Documents	344
<i>Chien D.C. Ta and Tuoi Phan Thi</i>	

Emerging Data Management Systems and Applications

The Present and Future of Large-Scale Systems Modeling and Engineering . . .	355
<i>Dirk Draheim</i>	
An Overview of Digital Signing and the Influencing Factors in Estonian Local Governments	371
<i>Sigrid Felt, Ingmar Pappel, and Ingrid Pappel</i>	
Aggregating Service Level Agreements in Services Bundling: A Semiring-Based Approach	385
<i>Trung-Viet Nguyen, Lam-Son Lê, and Khuong Nguyen-An</i>	
Non-disjoint Multi-agent Scheduling Problem on Identical Parallel Processors	400
<i>F. Sadi, T. Van Ut, N. Huynh Tuong, and A. Soukhal</i>	
An Evaluative Model to Assess the Organizational Efficiency in Training Corporations	415
<i>Ana Fernandes, Henrique Vicente, Margarida Figueiredo, Mariana Neves, and José Neves</i>	
Author Index	429