

Samia Bouzefrane · Soumya Banerjee  
Françoise Sailhan · Selma Boumerdassi  
Eric Renault (Eds.)

# Mobile, Secure, and Programmable Networking

Third International Conference, MSPN 2017  
Paris, France, June 29–30, 2017  
Revised Selected Papers

# Contents

Efficient Implementation of Pedersen Commitments Using Twisted Edwards Curves . . . . .	1
<i>Christian Franck and Johann Großschädl</i>	
Enhanced Sinkhole System: Collecting System Details to Support Investigations . . . . .	18
<i>Martin Ussath, Feng Cheng, and Christoph Meinel</i>	
An Autonomous System Based Security Mechanism for Network Coding Applications in Content-Centric Networking . . . . .	34
<i>Li Xu, Hui Li, Jiawei Hu, Yunmin Wang, and Huayu Zhang</i>	
An Ultra-Lightweight Authentication Scheme for Heterogeneous Wireless Sensor Networks in the Context of Internet of Things . . . . .	49
<i>Hamza Khemissa, Djamel Tandjaoui, and Samia Bouzefrane</i>	
Authentication Based Elliptic Curves Digital Signature for ZigBee Networks . . . . .	63
<i>Ouassila Hoceini, Hossam Afifi, and Rachida Aoudjit</i>	
Formal Modeling and Performance Evaluation of Network's Server Under SYN/TCP Attack. . . . .	74
<i>Naouel Ouroua, Wassila Bouzegza, and Malika Ioualalen</i>	
Empirical Evaluation of a Distributed Deployment Strategy for Virtual Networks . . . . .	88
<i>Carsten Hahn, Stephan Holzner, Lenz Belzner, and Michael Till Beck</i>	
Identifying Service Contexts for QoS Support in IoT Service Oriented Software Defined Networks . . . . .	99
<i>Hong Jin Kim, Moon Yong Jung, Won Sang Chin, and Ju Wook Jang</i>	
A Fast Bit-Level MPLS-Based Source Routing Scheme in Software Defined Networks: SD- $\{W,L\}$ AN . . . . .	109
<i>Ali El Kamel, Manel Majdoub, and Habib Youssef</i>	
Requirements and Complexity Analysis of Cross-Layer Design Optimization for Adaptive Inter-vehicle DSRC . . . . .	122
<i>Keyvan Ansari, Hannaneh Sadat Naghavi, Yu-Chu Tian, and Yanming Feng</i>	

Technique Stages for Efficient Wideband Spectrum Sensing  
Based on Compressive Sensing. . . . . 138  
*Evelio Astaiza, Héctor Bermudez, and Octavio J. Salcedo Parra*

Predicting Response Time-Related Quality-of-Service Outages  
of PaaS Cloud Applications by Machine Learning. . . . . 155  
*Angela Schedel and Philipp Brune*

Intelligent Road Design Using Artificial Intelligence Techniques. . . . . 166  
*Camilo Isaza Fonseca, Octavio J. Salcedo Parra,  
and Brayan S. Reyes Daza*

Mobility Prediction in Vehicular Networks: An Approach Through Hybrid  
Neural Networks Under Uncertainty . . . . . 178  
*Soumya Banerjee, Samia Bouzefrane, and Paul Mühlethaler*

Building of an Information Retrieval System Based  
on Genetic Algorithms. . . . . 195  
*Badr Hssina, Soukaina Lamkhantar, Mohammed Erritali,  
Abdelkrim Merbouha, and Youness Madani*

A GRC-Centric Approach for Enhancing Management Process  
of IoT-Based Health Institution. . . . . 207  
*Fouzi Lezzar, Djamel Benmerzoug, Kitouni Ilham,  
and Aomar Osmani*

Energy Consumption Estimation for Energy-Aware, Adaptive Sensing  
Applications . . . . . 222  
*Nattachart Tamkittikhun, Amen Hussain, and Frank Alexander Kraemer*

**Author Index . . . . . 237**