

# **2013 27th International Conference on Advanced Information Networking and Applications Workshops**

**(WAINA 2013)**

**Barcelona, Spain  
25 – 28 March 2013**

**Pages 1-824**



**IEEE Catalog Number: CFP1381D-PRT  
ISBN: 978-1-4673-6239-9**

# 2013 27th International Conference on Advanced Information Networking and Applications Workshops

## WAINA 2013

### Table of Contents

<b>Message from IEEE AINA 2013 Steering Committee</b>	
Co-Chairs.....	xxix
<b>Message from IEEE AINA 2013 General Co-Chairs.....</b>	
	xxxi
<b>Message from IEEE AINA 2013 Program Committee</b>	
Co-Chairs.....	xxxii
<b>Message from IEEE AINA 2013 Workshops Co-Chairs.....</b>	
	xxxiv
<b>Message from DMWPC 2013 International Workshop</b>	
Chairs.....	xxxvi
<b>DMWPC 2013 Organizing Committee.....</b>	
	xxxvii
<b>DMWPC 2013 Reviewers.....</b>	
	xxxviii
<b>Welcome Message from NetVE 2013 Workshop Co-Chairs.....</b>	
	xxxix
<b>NetVE 2013 Organizing Committee.....</b>	
	xl
<b>NetVE 2013 Reviewers.....</b>	
	xli
<b>Welcome Message from PAEWN 2013 Workshop</b>	
Co-Chairs.....	xlii
<b>PAEWN 2013 Organizing Committee.....</b>	
	xliiii
<b>PAEWN 2013 Reviewers.....</b>	
	xliv
<b>Message from WReCS 2013 Workshop Co-Chairs.....</b>	
	xlv
<b>WReCS 2013 Organizing Committee.....</b>	
	xlvi
<b>WReCS 2013 Reviewers.....</b>	
	xlvii
<b>Welcome Message from MAW 2013 Symposium Co-Chairs.....</b>	
	xlviii
<b>MAW 2013 Organizing Committee.....</b>	
	xlvix
<b>MAW 2013 Reviewers.....</b>	
	li
<b>Welcome Message from IWDENS 2013 Workshop</b>	
Organizers.....	lii
<b>IWDENS 2013 Organizing Committee.....</b>	
	liiii
<b>IWDENS 2013 Reviewers.....</b>	
	liv

<b>Welcome Message from BICom 2013 International</b>	
<b>Workshop Co-Chairs</b> .....	lv
<b>BICom 2013 Organizing Committee</b> .....	lvi
<b>BICom 2013 Reviewers</b> .....	lviii
<b>Welcome Message from HWISE 2013 International</b>	
<b>Workshop Co-Chairs</b> .....	lvix
<b>HWISE 2013 Organizing Committee</b> .....	lx
<b>HWISE 2013 Reviewers</b> .....	lxii
<b>Welcome Message from TeNAS 2013 Workshop</b>	
<b>Organizers</b> .....	lxiii
<b>TeNAS 2013 Organizing Committee</b> .....	lxiv
<b>TeNAS 2013 Reviewers</b> .....	lxvi
<b>Message from CCSI 2013 Symposium Co-Chairs</b> .....	lxvii
<b>CCSI 2013 Organizing Committee</b> .....	lxviii
<b>CCSI 2013 Reviewers</b> .....	lxix
<b>Message from SMPE 2013 Symposium Program Chairs</b> .....	lxx
<b>SMPE 2013 Organizing Committee</b> .....	lxxi
<b>SMPE 2013 Reviewers</b> .....	lxxiii
<b>Welcome Message from iCCI 2013 International</b>	
<b>Workshop Organizers</b> .....	lxxiv
<b>iCCI 2013 Organizing Committee</b> .....	lxxv
<b>iCCI 2013 Reviewers</b> .....	lxxvi
<b>Message from FINA 2013 Symposium Co-Chairs</b> .....	lxxvii
<b>FINA 2013 Organizing Committee</b> .....	lxxviii
<b>FINA 2013 Reviewers</b> .....	lxxix
<b>Message from PAMS 2013 Workshop Co-Chairs</b> .....	lxxx
<b>PAMS 2013 Organizing Committee</b> .....	lxxxii
<b>PAMS 2013 Reviewers</b> .....	lxxxiv
<b>Welcome Message from COLLABES 2013 International</b>	
<b>Workshop Organizers</b> .....	lxxxv
<b>COLLABES 2013 Organizing Committee</b> .....	lxxxvi
<b>COLLABES 2013 Reviewers</b> .....	lxxxviii
<b>Message from ICAES 2013 International Workshop</b>	
<b>Co-Chairs</b> .....	lxxxix
<b>ICAES 2013 Organizing Committee</b> .....	xc
<b>ICAES 2013 Reviewers</b> .....	xcii
<b>Welcome Message from CCPI 2013 Workshop Chair</b> .....	xciii
<b>CCPI 2013 Organizing Committee</b> .....	xciv
<b>CCPI 2013 Reviewers</b> .....	xcv

<b>Welcome Message from the PITSaC 2013 Workshop</b>	
Co-Chairs.....	xcv
PITSaC 2013 Organizing Committee.....	xcvii
PITSaC 2013 Reviewers.....	P IC
<b>Message from EOOPS 2013 International Workshop</b>	
Organizers.....	P IC
EOOPS 2013 Organizing Committee.....	cii
EOOPS 2013 Reviewers.....	ciii
<b>Welcome Message from NetMM 2013 International Workshop Co-Chairs.....</b>	
	P IC
NetMM 2013 Organizing Committee.....	P IC
NetMM 2013 Reviewers.....	cvi
Message from SMME 2013 Workshop Chair.....	cvii
SMME 2013 Organizing Committee.....	cviii
SMME 2013 Reviewers.....	P IC
<b>Welcome Message from BLSMC 2013 Workshop</b>	
Organizers.....	cx
BLSMC 2013 Organizing Committee.....	cxii
BLSMC 2013 Reviewers.....	cxii
<b>Message from EASyCoSe 2013 International Workshop</b>	
Co-Chairs.....	P IC
EASyCoSe 2013 Organizing Committee.....	cxiv
EASyCoSe 2013 Reviewers.....	cxv

## **The Sixth International Workshop on Data Management for Wireless and Pervasive Communications (DMWPC 2013)**

### **Session 1: Data Management for Wireless and Ubiquitous Systems**

Strategies for Enhancing Data Quality in Mobile CRM .....	1
<i>Richard Hable and Thomas Aglassinger</i>	
On Scheduling Real-Time Multi-item Queries in Multi-RSU Vehicular Ad Hoc Networks (VANETs) .....	7
<i>G.G. Md. Nawaz Ali, Edward Chan, and Wenzhong Li</i>	
A Basic Study of Data Collection Ratio of Drifting Sensor Networks for Monitoring Waterways .....	13
<i>Kazuma Mitake and Susumu Ishihara</i>	
A Method for Establishing Routes and IPv6 Addressing Based on the Estimated Distance from Neighboring Nodes in Wireless Mesh Networks .....	21
<i>Yuta Maruoka and Kazunori Ueda</i>	

## **Session 2: Data Management Analysis**

System Design for Estimating Social Relationships from Sensing Data .....	27
<i>Akihiro Kida, Tatsuro Takahashi, Ryoichi Shinkuma, Hiroyuki Kasai, Kazuhiro Yamaguchi, and Oscar Mayora</i>	
Social Link Analysis Using Wireless Beaconing and Accelerometer .....	33
<i>Kazuto Shimizu, Masayuki Iwai, and Kaoru Sezaki</i>	
Data Mining and Analysis of Large Scale Time Series Network Data .....	39
<i>Patricia Morreale, Steve Holtz, and Allan Goncalves</i>	

## **The Second International Workshop on Networked Virtual Enterprises (NetVE 2013)**

### **Session 1: Networked Virtual Enterprises**

ARISTOTELE: A Semantic-Driven Platform for Enterprise Management .....	44
<i>Pierluigi Del Nostro, Francesco Orciuoli, Stefano Paolozzi, Pierluigi Ritrovato, and Daniele Toti</i>	
Behavior Modeling in Virtual Organizations .....	50
<i>Mahdieh Shadi and Hamideh Afsarmanesh</i>	
A Ontological Collaborative Framework for Business Process Integration .....	56
<i>Minh Tuan Nguyen Hoang, Trung Van Nguyen, and Hanh Huu Hoang</i>	
MAR-AODV: Innovative Routing Algorithm in MANET Based on Mobile Agent .....	62
<i>Cung Trong Cuong, Vo Thanh Tu, and Nguyen Thuc Hai</i>	

## **The Eighth International Workshop on the Performance Analysis and Enhancement of Wireless Networks (PAEWN 2013)**

### **Session 1: WSNs, VANETS, and Mesh Networks**

Simulating Wireless Nano Sensor Networks in the NS-3 Platform .....	67
<i>G. Piro, L.A. Grieco, G. Boggia, and P. Camarda</i>	
An Admission Control Scheme Based on Transmissions Scheduling for Wireless Mesh Networks .....	75
<i>Juliette Dromard, Rida Khatoun, and Lyes Khoukhi</i>	
An LSPI Based Reinforcement Learning Approach to Enable Network Cooperation in Cognitive Wireless Sensor Network .....	82
<i>Milos Rovcanin, Eli De Poorter, Ingrid Moerman, and Piet Demeester</i>	
A Performance Evaluation of Load Balancing and QoS-aware Gateway Discovery Protocol for VANETs .....	90
<i>Noura Aljeri, K. Abrougui, M. Almulla, and A. Boukerche</i>	

## **Session 2: Communication Systems**

A Modular Architecture for QoS Provisioning over Wireless Links .....	95
<i>Maurizio Casoni, Alessandro Paganelli, and Paolo Valente</i>	
Multi-threaded Simulation of 4G Cellular Systems within the LTE-Sim Framework .....	101
<i>Alessandro Pellegrini and Giuseppe Piro</i>	
Effect of Radio Interference Models on the Performance of Time Slot Assignment Algorithms in IEEE 802.16j Relay Networks .....	107
<i>Ryosuke Mine, Go Hasegawa, Yoshiaki Taniguchi, and Hirotaka Nakano</i>	
Joint Random Linear Network Coding and Convolutional Code with Interleaving for Multihop Wireless Network .....	114
<i>Misfa Susanto, Yim Fun Hu, and Prashant Pillai</i>	

## **Session 3: Performance Evaluation of Wireless and Mobile Networks**

Performance Evaluation of Alternative Network Architectures for Sensor-Satellite Integrated Networks .....	120
<i>Suraj Verma, Prashant Pillai, and Yim-Fun Hu</i>	
The Price of Secure Mobile Video Streaming .....	126
<i>Gabor Feher</i>	
Bounding End-to-End Delay for Real-Time Environmental Monitoring in Avionic Systems .....	132
<i>Daeha Jin, Junhee Ryu, Juyoung Park, Jaemyoun Lee, Heonshik Shin, and Kyungtae Kang</i>	

## **The Second International Workshop on Renewable Computing Systems (WReCS 2013)**

### **Session 1: Fault Tolerance and Dependable Devices**

Fault Tolerance on NoCs .....	138
<i>J.M. Montanana, D. de Andres, and F. Tirado</i>	

### **Session 2: Reconfigurable Systems**

Research of PE Array Connection Network for Cool Mega-Array .....	144
<i>Rie Uno, Nobuaki Ozaki, and Hideharu Amano</i>	
An FPGA Implementation of Reconfigurable Real-Time Vision Architecture .....	150
<i>Jorge Hiraiwa and Hideharu Amano</i>	
A Circuit Division Method for High-Level Synthesis on Multi-FPGA Systems .....	156
<i>Kugami Daiki, Takaaki Miyajima, and Hideharu Amano</i>	

### **Session 3: Energy Efficient Computing Systems**

Proposal of Sensor Data Gathering with Single Board Computer .....	162
<i>Katsuyoshi Matsumoto, Motoi Yamagiwa, Minoru Uehara, and Hideki Mori</i>	
Interactive Interface for Web-based Programming Environment .....	168
<i>Hideaki Yanagisawa and Kayo Kondou</i>	

Proposal of Solar Powered Grid Computing with Reuse Handheld Devices .....	174
<i>Motoi Yamagiwa, Katsuyoshi Matsumoto, and Minoru Uehara</i>	

## **The Sixth International Symposium on Mining and Web (MAW 2013)**

### **Session 1: Data Mining and Social Networks**

Mining Online Book Reviews for Sentimental Clustering .....	179
<i>Eric Lin, Shiao-fen Fang, and Jie Wang</i>	
Mining Botnet Behaviors on the Large-Scale Web Application Community .....	185
<i>Daniel Garant and Wei Lu</i>	
Detecting Local Events by Analyzing Spatiotemporal Locality of Tweets .....	191
<i>Takuya Sugitani, Masumi Shirakawa, Takahiro Hara, and Shojiro Nishio</i>	
Two-Phase Genetic Algorithm for Social Network Graphs Clustering .....	197
<i>Jan Kohout and Roman Neruda</i>	

### **Session 2: Data Modeling and Web Applications**

Document Modeling Using Syntactic and Semantic Information .....	203
<i>Émilie Au, Mohamed Bouguessa, and Shengrui Wang</i>	
Foreign Exchange Trading Rules Using a Single Technical Indicator from Multiple Timeframes .....	207
<i>Shangkun Deng and Akito Sakurai</i>	
A General Purpose Model for Future Prediction Based on Web Search Data: Predicting Greek and Spanish Election .....	213
<i>Spyros E. Polykalas, George N. Prezerakos, and Agisilaos Konidaris</i>	
A Feasibility Study on Using Low-Cost Gaming Devices for Rehabilitation .....	219
<i>Kin Fun Li and Ana-Maria Sevcenco</i>	
A Novel Web Service for Mammography Images Indexing .....	225
<i>Alfonso Farruggia, Rosario Magro, and Salvatore Vitabile</i>	

## **The Fifth International Workshop on Disaster and Emergency Information Network Systems (IWDENS 2013)**

### **Session 1: Disaster Information Networks**

Directional Antenna Control Based Mobile Adhoc Network for Disaster Information System .....	231
<i>Toshihiro Suzuki, Yoshitaka Shibata, Kazuo Takahata, and Noriki Uchida</i>	
Disaster Information Network Based on Software Defined Network Framework .....	237
<i>Yuto Sekin, Noriki Uchida, Yoshitaka Shibata, and Norio Shiratori</i>	
Development of Smartphone Application for Off-Line Use in Case of Disaster .....	243
<i>Hiroaki Yuze, Yuzhe Qian, and Naoyoshi Suzuki</i>	

## Session 2: Disaster Information Systems

Proposal of Delay Tolerant Network with Cognitive Wireless Network for Disaster Information Network System .....	249
<i>Noriki Uchida, Norihiro Kawamura, Nicholas Williams, Kazuo Takahata, and Yoshitaka Shibata</i>	
Self Power Supplied Micro Wireless Ballooned Network for Disaster Recovery .....	255
<i>Saneatsu Arimura, Noriki Uchida, and Yoshitaka Shibata</i>	
Using Workflow Management Systems to Improve Disaster Response Processes .....	261
<i>Marlen Hofmann, Stefan Sackmann, and Hans Betke</i>	

## The Sixth International Workshop on Bio and Intelligent Computing (BICom 2013)

### Session 1: Fuzzy and Neural Networks Systems

A Fuzzy-Based Trustworthiness System for P2P Communications in JXTA-Overlay Considering Positive and Negative Effects .....	267
<i>Kouhei Umezaki, Evjola Spaho, Leonard Barolli, Makoto Ikeda, Fatos Xhafa, and Makoto Takizawa</i>	
On-Line Signature Evaluation Using Fuzzy Set Theory .....	273
<i>Jungpil Shin and Tomomi Kikuchi</i>	
A Fuzzy-Based Simulation System for Controlling Sensor Speed in Wireless Sensor Networks .....	278
<i>Qi Wang, Leonard Barolli, Elis Kulla, Gjergji Mino, Makoto Ikeda, and Makoto Takizawa</i>	
Using Artificial Neural Network for Automatic Assessment of Video Sequences .....	285
<i>Brice Ekobo Akoa, Emmanuel Simeu, and Fritz Lebowsky</i>	

### Session 2: Biometric-Based and Swarm Intelligence Algorithms

A Biometric-Based User Authentication Scheme for Heterogeneous Wireless Sensor Networks .....	291
<i>Ashok Kumar Das and Bezawada Bruhadeshwar</i>	
Information Splitting Using Crypto-biometrics Approach .....	297
<i>Marek R. Ogiela and Lidia Ogiela</i>	
A Comprehensive Study of Bluetooth Fingerprinting-Based Algorithms for Localization .....	300
<i>Li Zhang, Xiao Liu, Jie Song, Cathal Gurrin, and Zhiliang Zhu</i>	
Ant Colony Based Forwarding Method for Content-Centric Networking .....	306
<i>Chengming Li, Kouji Okamura, and Wenjing Liu</i>	

### Session 3: Intelligent Algorithms and Systems

Performance Evaluation of WMN-GA System for Node Placement in WMNs Considering Normal Distribution of Mesh Clients and Different Selection and Mutation Operators .....	312
<i>Admir Barolli, Tetsuya Oda, Evjola Spaho, Leonard Barolli, Fatos Xhafa, and Makoto Takizawa</i>	
How to Compare and Interpret Two Learnt Decision Trees from the Same Domain? .....	318
<i>Petra Pernert</i>	
Improvements the Seccomp Sandbox Based on PBE Theory .....	323
<i>Ma Bo, Mu Dejun, Fan Wei, and Hu Wei</i>	



Estimate Thermo-physical Parameters from Characterization of the Building Materials by Using Artificial Intelligence .....	329
<i>Thanh Nga Thai</i>	

## **The Ninth International Workshop on Heterogeneous Wireless Networks (HWISE 2013)**

### **Session 1: Ad-Hoc Networks and MANETs**

Extensive Simulation Performance Analysis for DSDV, DSR and AODV MANET Routing Protocols .....	335
<i>Qutaiba Razouqi, Ahmed Boushehri, Mohamed Gaballah, and Lina Alsaleh</i>	
Effect of Relay Nodes on End-to-End Delay in Multi-hop Wireless Ad-hoc Networks .....	343
<i>Raja Vara Prasad Yerra and P. Rajalakshmi</i>	
A Novel Probabilistic Key Management Algorithm for Large-Scale MANETs .....	349
<i>Mohammed Gharib, Ehsan Emamjomeh-Zadeh, Ashkan Norouzi-Fard, and Ali Movaghar</i>	
GAODV: A Modified AODV Against Single and Collaborative Black Hole Attacks in MANETs .....	357
<i>Sanjay K. Dhurandher, Isaac Woungang, Raveena Mathur, and Prashant Khurana</i>	
A Secure and Efficient Authentication Protocol (SEAP) for MANETs with Membership Revocation .....	363
<i>Soumyadev Maity and R.C. Hansdah</i>	

### **Session 2: WSNs Algorithms and Systems**

Performance Comparison of Wireless Sensor Networks for Different Speeds of Multi Mobile Sensor Nodes .....	371
<i>Tao Yang, Elis Kulla, Leonard Barolli, Gjergji Mino, and Makoto Takizawa</i>	
A Distributed TDMA Slot Scheduling Algorithm for Spatially Correlated Contention in WSNs .....	377
<i>Ashutosh Bhatia and R.C. Hansdah</i>	
Inner-Distance Measurement and Shape Recognition of Target Object Using Networked Binary Sensors .....	385
<i>Shigeo Shioda</i>	
Proposal and Implementation of Encounter Data Transmission with Ultrasonic Sensor-Based Active Wakeup Mechanism for Energy Efficient Sparse Wireless Sensor Network .....	393
<i>Tatsuhiko Nakano, Yutaka Arakawa, Shigeaki Tagashira, Akira Fukuda, and Riadh Dhaou</i>	

### **Session 3: WSNs Performance Analysis**

On Determining Bandwidth Usage Threshold to Support Real-Time Multimedia Applications in Wireless Multimedia Sensor Networks .....	401
<i>Muhammad Omer Farooq and Thomas Kunz</i>	
Single-Sink Mobility Performance Analysis on a Wireless Sensor Networks .....	407
<i>Majid Bayani Abbasy and Luis Miguel López Ordóñez</i>	

Wireless Networks Sensors and Social Streams .....	413
<i>Dmitry Namiot and Manfred Sneps-Sneppe</i>	

#### **Session 4: Vehicular Networks Applications**

Vehicle Path Verification Using Wireless Sensor Networks .....	419
<i>Gerry Howser, Sriram Chellappan, and Vamsi Paruchuri</i>	
WiFi for Vehicular Communication Systems .....	425
<i>Janis Jansons, Ernests Petersons, and Nikolajs Bogdanovs</i>	
WiMAX-WLAN Vehicle-to-Infrastructure Network Architecture during Fast Handover Process .....	431
<i>Michael Charitos and Grigorios Kalivas</i>	

#### **Session 5: Models and Methods for WSNs**

Stabilization and Lifetime Optimization in Distributed Sensor Networks .....	437
<i>Jacques Bahi, Mohammed Haddad, Mourad Hakem, and Hamamache Kheddouci</i>	
A Stochastic Process Based Framework of Redeployment Model for Wireless Sensor Network .....	443
<i>Ravindara Bhatt and Raja Datta</i>	
ANCH: A New Clustering Algorithm for Wireless Sensor Networks .....	450
<i>Morteza M. Zanjireh, Ali Shahrabi, and Hadi Larijani</i>	
Malicious Node Detection in Wireless Sensor Networks .....	456
<i>Alaa Atassi, Naoum Sayegh, Imad Elhajj, Ali Chehab, and Ayman Kayssi</i>	

#### **Session 6: VANETs and Mobile Networks**

A Protocol for Authentication with Multiple Levels of Anonymity (AMLA) in VANETs .....	462
<i>N. Bharadiya Bhavesh, Soumyadev Maity, and R.C. Hansdah</i>	
Behavioral Mobility Model with Geographic Constraints .....	470
<i>Razvan Beuran, Shinsuke Miwa, and Yoichi Shinoda</i>	
A Priority Based Differentiation for Contention Mechanism in Legacy DCF Method .....	478
<i>Sanjay K. Dhurandher, Isaac Woungang, Sahil Sharma, and Veeresh Goswami</i>	

#### **Session 7: Cellular Networks and LTE Systems**

Mobility-Sensitive Power Control for MBSFN Cellular Networks .....	483
<i>Konstantinos Asimakis, Christos Bouras, Vasileios Kokkinos, and Andreas Papazois</i>	
Toward Green Mobility in Femtocell Networks .....	488
<i>Aicha Ben Salem and Kaouthar Sethom Ben Reguiga</i>	
Vertical Handover Decision Policy Based on the End User's Perceived Quality of Service .....	493
<i>Sassi Maaloul, Mériem Afif, and Sami Tabbane</i>	
Effects of Signaling Attacks on LTE Networks .....	499
<i>Ramzi Bassil, Imad H. Elhajj, Ali Chehab, and Ayman Kayssi</i>	

## **Session 8: Cognitive Radio Networks and WiFi**

A Novel Learning-Based Spectrum Sensing Technique for Cognitive Radio Networks .....	505
<i>Mehmet E. Aydin, Ghazanfar A. Safdar, and Nauman Aslam</i>	
Quantifying the Multiple Cognitive Radio Interfaces Advantage .....	511
<i>Muhammad Talal Hassan, Ejaz Ahmed, Junaid Qadir, and Adeel Baig</i>	
A Proposal of Traffic Model That Allows Estimating Throughput Mean Values .....	517
<i>Cesar Hernandez, Luis F. Pedraza, and Camila Salgado</i>	
On the Design of Energy-Aware 3G/WiFi Heterogeneous Networks under Realistic Conditions .....	523
<i>Sireen Taleb, Mohamad Dia, Jamal Farhat, Zaher Dawy, and Hazem Hajj</i>	

## **Session 9: Wireless Networks Modeling and Performance Evaluation**

The Inter-cell Interference Suppression Algorithm Based on the JP-CoMP and Performance Simulation .....	528
<i>Weihong Fu, Lili Ma, Cheng Wang, Qingliang Kong, and Weixin Tian</i>	
Framework for Generic Context- and Policy-Based Traffic Distribution in Heterogeneous Wireless Networks: Black Rider .....	534
<i>Sandra Frei, Woldemar Fuhrmann, and Bogdan V. Ghita</i>	
Decoupling Losses for End-to-End Bandwidth Guarantees in Interdomain Traffic .....	542
<i>Fernando Fernández-Valdés Pedrosa, Manuel Fernández Veiga, Cándido López García, and Andrés Suárez González</i>	
Metropolitan Spectrum Survey in Bogota Colombia .....	548
<i>Luis Fernando Pedraza, Felipe Forero, and Ingrid Paez</i>	

## **Session 10: Network Applications**

Access Control with RFID in the Internet of Things .....	554
<i>Steffen Elmstrøm Holst Jensen and Rune Hylsberg Jacobsen</i>	
Scheduling Workflows in Multi-cluster Environments .....	560
<i>Silvio Luiz Stanzani, Liria Matsumoto Sato, and Marco A.S. Netto</i>	
Empirical Evaluation of Superposition Coded Multicasting for Scalable Video .....	566
<i>Chun Pong Lau, Basem Shihada, and Pin-Han Ho</i>	
Improving Secure Routing Protocols Using Additional Features .....	572
<i>José Luis Tornos and José Luis Salazar</i>	

## **The Sixth International Workshop on Telecommunication Networking, Applications, and Systems (TeNAS 2013)**

### **Session 1: Network Technologies — Deployment and Performance**

Analyzing Broadband Divide in the Farming Sector .....	578
<i>Michael Jensen, Jose M. Gutierrez, and Jens M. Pedersen</i>	

A Retrospective Analysis of QoS Deployment, Operation and Use in Enterprise and Provider Networks .....	583
<i>Michael Mackay and Christopher Edwards</i>	
Performance Evaluation of Transmission Order Control on Relay Nodes in Multi-hop Wireless Networks .....	589
<i>Kentaro Kameyama, Hiroyuki Koga, Masayoshi Shimamura, Yutaka Fukuda, and Takeshi Ikenaga</i>	
Client Buffering Considerations for Video Streaming .....	595
<i>R. Pereira and E.G. Pereira</i>	

## **Session 2: Applications and Algorithms**

Sensor Data Processing Method Based on Observed Person's Similarity for Motion Estimation .....	601
<i>Shintaro Imai, Mariko Miyamoto, Yoshikazu Arai, and Toshimitsu Inomata</i>	
Designing a Testbed for Broadcast Opportunistic Wireless Data Dissemination Protocols .....	607
<i>Nasif Muslim and Florian Pregizer</i>	
A Machine Learning Algorithm for Searching Vectorised RDF Data .....	613
<i>Asaad Sabah Hadi, Paul Fergus, Chelsea Dobbins, and Abbas Muhsin Al-Bakry</i>	
Design and Implementation of Real-Time Flow Viewer across Different Domains .....	619
<i>Wun-Yuan Huang, Jen-Wei Hu, Ta-Yuan Chou, and Te-Lung Liu</i>	

## **The Fourth International Workshop on Cloud Computing, Services, and Interoperability (CCSI 2013)**

### **Session 1: Algorithms and Modeling for Cloud Computing**

Performance Analysis and Optimization of Map Only Left Outer Join .....	625
<i>Ming Hao, Tomasz Wiktor Wlodarczyk, and Chunming Rong</i>	
Efficient Service Management for Multimedia Sessions in Hybrid Clouds .....	632
<i>Cristina Dutu, Elena Apostol, Catalin Leordeanu, and Valentin Cristea</i>	
Static Testing as a Service on Cloud .....	638
<i>Siqin Chen, Junfei Huang, and Yunzhan Gong</i>	
Structured and Unstructured Data in the Cloud: A Swiss Perspective on Readiness and Internal Controls .....	643
<i>David Simms and Solange Ghernaouti</i>	
TeraScaler ELB-an Algorithm of Prediction-Based Elastic Load Balancing Resource Management in Cloud Computing .....	649
<i>He-Sheng Wu, Chong-Jun Wang, and Jun-Yuan Xie</i>	

### **Session 2: Security Issues and Service Computing in Clouds**

A DDoS Mitigation System with Multi-stage Detection and Text-Based Turing Testing in Cloud Computing .....	655
<i>Vincent Shi-Ming Huang, Robert Huang, and Ming Chiang</i>	
A Secure Shared Group Model of Cloud Storage .....	663
<i>Ching-Hung Yeh</i>	

Secure Picture Data Partitioning for Cloud Computing Services .....	668
<i>René Leistikow and Djamshid Tavangarian</i>	
The Cloud Streaming Service Migration in Cloud Video Storage System .....	672
<i>Yi-Hsing Tsai</i>	

## **The Seventh International Symposium on Security and Multimodality in Pervasive Environment (SMPE 2013)**

### **Session 1: Secure Systems**

SWIFT: A Secure Web Domain Filter in Hardware .....	678
<i>Vlado Altmann, Jens Rohrbeck, Jan Skodzik, Peter Danielis, Dirk Timmermann, Maik Roennau, and Matthias Ninnemann</i>	
A Practical Steganographic Approach for Matroska Based High Quality Video Files .....	684
<i>Nikolaos Pitropakis, Costas Lambrinouidakis, Dimitris Geneiataakis, and Dimitris Gritzalis</i>	
A Scheme for the Generation of Strong ICMetrics Based Session Key Pairs for Secure Embedded System Applications .....	689
<i>Ruhma Tahir, Huosheng Hu, Dongbing Gu, Klaus McDonald-Maier, and Gareth Howells</i>	
Toward Mobile Authentication with Keystroke Dynamics on Mobile Phones and Tablets .....	697
<i>Matthias Trojahn and Frank Ortmeier</i>	
Analysis of the Forensic Traces Left by AirPrint in Apple iOS Devices .....	703
<i>Luis Gómez-Miralles and Joan Arnedo-Moreno</i>	

### **Session 2: Privacy, Vulnerability, and Trust Computing**

Bidirectional Private Policy Matching Based on Additively Homomorphic Encryption Systems .....	709
<i>Momoko Aoyama, Fumihiko Mori, and Hirofumi Yamaki</i>	
Integration of Privacy Protection Mechanisms in Location-Based Services .....	717
<i>Gianluca Dini and Pericle Perazzo</i>	
Determining Home Users' Vulnerability to Universal Plug and Play (UPnP) Attacks .....	725
<i>Shadi Esnaashari, Ian Welch, and Peter Komisarczuk</i>	
Reputation Scoring System Using an Economic Trust Model: A Distributed Approach to Evaluate Trusted Third Parties on the Internet .....	730
<i>Marat Vyshegorodtsev, Daisuke Miyamoto, and Yasushi Wakahara</i>	

### **Session 3: Network and Communication Technologies**

Behavior Ontology: A Framework to Detect Attack Patterns for Security .....	738
<i>Sujeong Woo, Jinho On, and Moonkun Lee</i>	
Petri-Net Based User Profile Data Ontology for SNS .....	744
<i>Hwa-Young Jeong, Jong-Hyuk Park, Young-Sik Jeong, and Doo-Soon Park</i>	
A Two-tier Overlay Publish/Subscribe System for Sensor Data Stream Using Geographic Based Load Balancing .....	749
<i>Tatsuya Fukui, Satoshi Matsuura, Atsuo Inomata, and Kazutoshi Fujikawa</i>	

## **The Second International Workshop on inter-Clouds and Collective Intelligence (iCCI 2013)**

### **Session 1: Inter-Clouds Environments**

A Deadline Scheduler for Jobs in Distributed Systems .....	757
<i>Quentin Perret, Gabriel Charlemagne, Stelios Sotiriadis, and Nik Bessis</i>	
Towards Inter-cloud Simulation Performance Analysis: Exploring Service-Oriented Benchmarks of Clouds in SimIC .....	765
<i>Stelios Sotiriadis, Nik Bessis, and Nick Antonopoulos</i>	
Reputation Guided Genetic Scheduling Algorithm for Independent Tasks in Inter-clouds Environments .....	772
<i>Florin Pop, Valentin Cristea, Nik Bessis, and Stelios Sotiriadis</i>	
Intercloud Architecture Framework for Heterogeneous Cloud Based Infrastructure Services Provisioning On-Demand .....	777
<i>Yuri Demchenko, Canh Ngo, Cees de Laat, Joan Antoni Garcia-Espin, Sergi Figuerola, Juan Rodriguez, Luis M. Contreras, Giada Landi, and Nicola Ciulli</i>	

### **Session 2: Methods and Tools for Cloud Computing**

An Agent-Based Architecture and a Two-Phase Protocol for the Data Portability in Clouds .....	785
<i>Meriem Thabet and Mahmoud Boufaïda</i>	
Energy-Aware Social-Based Routing in Opportunistic Networks .....	791
<i>Cristian Chilipirea, Andreea-Cristina Petre, and Ciprian Dobre</i>	
User-Side Personalization Considering Privacy Preserving in Cloud Systems .....	797
<i>Leila Sharifi and Maryam Heidari Beisafar</i>	

## **The Ninth International Symposium on Frontiers of Information Systems and Network Applications (FINA 2013)**

### **Session 1A : Mobile, Ad Hoc and Mesh Networks**

Impact of IEEE 802.11 PHY/MAC Strategies on Routing Performance in Wireless Mesh Networks .....	803
<i>Chiraz Houaidia, Hanen Idoudi, Adrien Van Den Bossche, Thierry Val, and Leila Azouz Saidane</i>	
Multihop Mobility Metrics based on Link Stability .....	809
<i>Namusale Chama, Rute C. Sofia, and Susana Sargento</i>	
CORP: An Efficient Protocol to Prevent Data Loss in Mobile Ad-hoc Networks .....	817
<i>Ganapathy Mani</i>	
Early Detection Method of Service Quality Reduction Based on Linguistic and Time Series Analysis of Twitter .....	825
<i>Kazushi Ikeda, Gen Hattori, Chihiro Ono, Hideki Asoh, and Teruo Higashino</i>	

## **Session 1B : Distributed and Parallel Systems**

Applying Reputation to Virtual Magnetic Networks .....	831
<i>Henrique Galperin, Luiz Augusto de Paula Lima Jr., and Alcides Calsavara</i>	
Performance Evaluation of Hierarchical-Torus NoC .....	837
<i>Samia Loucif</i>	
Acceleration of Communication-Aware Task Mapping Techniques through GPU Computing .....	843
<i>Javier Reyes, Juan M. Orduña, Guillermo Viguera, and Rafael Tornero</i>	

## **Session 2A : Communication Technologies**

A New Active Path Identification and Filtering Method .....	849
<i>Lin Chen, Ming He, Zhihong Liu, and Guilin Cai</i>	
The Throughput Benefits of Network Coding for SW-ARQ Communication .....	854
<i>Alaa Alsebae, Mark Leeson, and Roger Green</i>	
On the Gaussian Characteristics of Aggregated Short-Lived Flows on High-Bandwidth Links .....	860
<i>Ghasem Kahe and Amir Hossein Jahangir</i>	

## **Session 2B : Modeling and Multimedia Systems**

Modeling Controls for Compliance—An Analysis of Business Process Modeling Languages .....	866
<i>Hans Betke, Kai Kittel, and Stefan Sackmann</i>	
Image Objects Phase/Intensity Measurements with Conjugated Liquid Crystal Modulators over Mach-Zehnder Interferometry .....	872
<i>Jen-Fa Huang, Ta-Chun Nieh, and Yu-Chang He</i>	
Experiment of Geometrically Invariant and Unneeded Synchronism Watermarking Using Winding Number .....	877
<i>Hiroki Nishikawa, Yoshio Kakizaki, Keiichi Iwamura, and Isao Echizen</i>	

## **Session 3A : Authentication and Secure Systems**

An ECC-Time Stamp Based Mutual Authentication and Key Management Scheme for WSNs .....	883
<i>Gaurav Indra and Renu Taneja</i>	
An Add-on for Security on Concurrent Multipath Communication SCTP .....	890
<i>Hamideh Jabalameli, Abbas Malekpour, Rashid Hassani, and Peter Luksch</i>	
DNS Update Extension to IPv6 Secure Addressing .....	896
<i>Hosnieh Rafiee, Martin von Löwis, and Christoph Meinel</i>	

## **Session 3B : Wireless and Sensor Networks**

Data Collection from Isolated Clusters in Wireless Sensor Networks Using Mobile Ferries .....	903
<i>Konstantin Mikhaylov and Jouni Tervonen</i>	
A Novel Cluster Head Selection Method based on K-Means Algorithm for Energy Efficient Wireless Sensor Network .....	910
<i>Geon Yong Park, Heeseong Kim, Hwi Woon Jeong, and Hee Yong Youn</i>	

Performance Analysis of Medium Access Control Protocol for Wireless Body Area Networks .....	916
<i>Nourchene Bradai, Lamia Chaari Fourati, and Lotfi Kamoun</i>	

### **Session 4A : Security and Privacy**

Protecting Access Pattern Privacy in Database Outsourcing Service .....	922
<i>T.B.P. Hue, D.N. Thuc, T.B.D. Thuy, I. Echizen, and S. Wohlgemuth</i>	
Privacy Enhanced and Computationally Efficient HSK-AKA LTE Scheme .....	929
<i>Khodor Hamandi, Imad Sarji, Ali Chehab, Imad H. Elhaji, and Ayman Kayssi</i>	
A Client Privacy Preserving Discovery Service Scheme .....	935
<i>Zhipeng Wang and Hong Zhu</i>	
Privacy Obfuscation with Bloom Filter for Effective Advertisement .....	941
<i>Ryuya Uda</i>	

### **Session 4B : Internet Computing and Web Applications**

A Novel Web Synchronization Method for Supporting Smooth Web Communication .....	947
<i>Kazuyuki Tasaka, Takashi Ozu, and Akira Idoue</i>	
An M2M Data Analysis Service System Based on Open Source Software Environments .....	953
<i>Shinji Kitagami, Moriki Yamamoto, Hisao Koizumi, and Takuo Sukanuma</i>	
A Virtual Campus Tour Service Using Remote Control Robots on Robot Service Network Protocol .....	959
<i>Toshiyuki Kusu, Yuka Ito, Takaaki Kida, Tetsuya Shimada, Masahiko Takahashi, Yuta Nomoto, Yosuke Tsuchiya, Masahiko Narita, and Yuka Kato</i>	

### **Session 5A : Routing and Communication Protocols**

The Impact of Content Oriented Routing on OpenFlow Burst Switched Optical Networks .....	965
<i>Mohammed Al-Momin and John Cosmas</i>	
Routing Protocol Based on the Position, Velocity, and Direction of the Nodes .....	971
<i>Gil Eduardo de Andrade, Luiz Augusto de Paula Lima, Alcides Calsavara, and Carlos Alberto Maziero</i>	
Comparison of Three Interpolation Techniques in Comb-Type Pilot-Assisted Channel Coded OFDM System .....	977
<i>Latif Ullah Khan, Zeeshan Sabir, Sahibzada Ali Mahmud, and Gul Muhammad Khan</i>	

### **Session 5B : Multimedia Networking and Applications**

CCN-TV: A Data-centric Approach to Real-Time Video Services .....	982
<i>Vincenzo Ciancaglini, Giuseppe Piro, Riccardo Loti, Luigi Alfredo Grieco, and Luigi Liquori</i>	
Continuous Usage Intention of Videoconferencing Software: A Case Study of One-to-Some Online Courses .....	990
<i>Tai-Tien Lin, Kuo-Lun Hsiao, Hsiu-Sen Chiang, and Ching-Ting Huang</i>	
Feedback Capacity of Different Complex Network Models .....	996
<i>Ghufuran Al-Shiridah, Khaled Mahdi, and Maytham Safar</i>	



## **Session 6A : Mobile Networks and Applications**

Android SMS Malware: Vulnerability and Mitigation .....	1004
<i>Khodor Hamandi, Ali Chehab, Imad H. Elhadj, and Ayman Kayssi</i>	
A Multi-Class Mobility Model for Dynamic and Dependable Systems .....	1010
<i>Peter Bull, Georgios Antonopoulos, Lin Guan, Xingang Wang, and Xunli Fan</i>	
Technical Challenges in Providing Remote Health Consultancy Services for the Unreached Community .....	1016
<i>Eiko Kai and Ashir Ahmed</i>	
A Markov Chain Based Model for Congestion Control in VANETs .....	1021
<i>M.A. Benatia, L. Khoukhi, M. Esseghir, and L. Merghem Boulahia</i>	

## **Session 6B : Scalable, Intelligent, and Autonomic Computing**

Group Communication Protocols for Scalable Groups of Peers .....	1027
<i>Dilawaer Duolikun, Hiroyuki Hama, Ailixier Aikebaier, Tomoya Enokido, and Makoto Takizawa</i>	
Green and Secure Office Space Using Near Field Coupling Communication System .....	1033
<i>T. Yanagawa, K. Nagata, M. Nozawa, T. Nakamura, and Y. Kado</i>	
Runtime Change of Collaboration Patterns in Autonomic Systems: Motivations and Perspectives .....	1038
<i>Giacomo Cabri and Nicola Capodieci</i>	

## **Session 7A : Pervasive and Ubiquitous Computing**

3D-to-2D Projection Algorithm for Remote Control Using Smartphone: Enhancing Smartphone Capability for Costless Wireless Audio Visual Consumer Appliance Control .....	1044
<i>P.N. Ali Fahmi, Prayoga Budhi, Jongmin Song, Ardiansyah, Deokjai Choi, and Youngchul Kim</i>	
A Recommendation Exchange Protocol between Smart Devices in Pervasive Computing Environment .....	1050
<i>Naima Iltaf, Abdul Ghafoor, and Usman Zia</i>	
A Configurable and Extensible Security Service Architecture for Smartphones .....	1056
<i>Dennis Titze, Philipp Stephanow, and Julian Schütte</i>	
Simulating Reader-to-Reader Interference in RFID Systems .....	1063
<i>Renato Ferrero, Filippo Gandino, Linchao Zhang, Bartolomeo Montrucchio, and Maurizio Rebaudengo</i>	

## **Session 7B : Intrusion Detection and Malware Analysis**

A Study on Practices against Malware in Free Software Projects .....	1070
<i>Ignacio Colomina, Joan Arnedo-Moreno, and Robert Clarisó</i>	
MCF: MultiComponent Features for Malware Analysis .....	1076
<i>P. Vinod, V. Laxmi, M.S. Gaur, Smita Naval, and Parvez Faruki</i>	
Modelling Attacker with Deciding Security Properties by Induction and Deduction .....	1082
<i>Yoney Kirsal-Ever, Agozie Eneh, Orhan Gemikonakli, and Leonardo Mostarda</i>	

Network Data Visualization Using Parallel Coordinates Version of Time-tunnel with 2Dto2D Visualization for Intrusion Detection .....	1088
<i>Yoshihiro Okada</i>	

## **The Third International Workshop on Protocols and Applications with Multi-homing Support (PAMS 2013)**

### **Session 1: Multi-homing Environments**

Design and Implementation of the NORNET CORE Research Testbed for Multi-homed Systems .....	1094
<i>Thomas Dreibholz and Ernst Gunnar Gran</i>	
Network Topology Inference from End-to-End Unicast Measurements .....	1101
<i>Amir Malekzadeh and Mike H. MacGregor</i>	

### **Session 2: Multi-homing Mechanisms**

Multipath Video Streaming Based on Hierarchical Routing Management .....	1107
<i>Thomas Volkert, Manuel Osdoba, Andreas Mitschele-Thiel, and Martin Becke</i>	
Non-renegable Selective Acknowledgments (NR-SACKs) for MPTCP .....	1113
<i>Fan Yang and Paul Amer</i>	
Mitigating Receiver's Buffer Blocking by Delay Aware Packet Scheduling in Multipath Data Transfer .....	1119
<i>Golam Sarwar, Roksana Boreli, Emmanuel Lochin, Ahlem Mifdaoui, and Guillaume Smith</i>	

## **The First International Workshop on Collaborative Enterprise Systems (COLLABES 2013)**

### **Session 1: Business Modelling and Enterprise Systems**

An Approach to Enterprise Collaboration through Concurrent Scene Understanding and Interoperation .....	1125
<i>John Mashford</i>	
A Business Model for Personalized Promotion Systems on Using WLAN Localization and NFC Techniques .....	1129
<i>Kam-Yiu Lam, Joseph K. Ng, and Jian-Tao Wang</i>	
Personal Analytics as a Factor of Change in Enterprise Communication and Collaboration Patterns .....	1135
<i>Serguei Dobrinevski</i>	
E-commerce and B2B Services Enterprises .....	1141
<i>Polina Fauska, Natalia Kryvinska, and Christine Strauss</i>	
Experience in Developing Concurrent Inferences on a De-regulated Supply Chain Network .....	1147
<i>Paul Moynihan and Wei Dai</i>	

## **Session 2: Cloud and Emerging Trends**

A Generic Logging Template for Infrastructure as a Service Cloud .....	1153
<i>Winai Wongthai, Francisco Liberal Rocha, and Aad van Moorsel</i>	
An SLA Ontology to Support Service Discovery in Future Cloud Markets .....	1161
<i>Giuseppe Di Modica, Giuseppe Petralia, and Orazio Tomarchio</i>	
Routing over Relaxed Triangulation Structures for P2P-based Virtual Environments .....	1167
<i>Eliya Buyukkaya and Maha Abdallah</i>	
A Novel Workflow Management System for Handling Process Adaptation and Compliance .....	1174
<i>M.S. Haji Omar, P.W.H. Chung, and C.W. Dawson</i>	

## **The First International Workshop on Informatics for Intelligent Context-Aware Enterprise Systems (ICAES 2013)**

### **Session 1: Intelligent Systems and Applications**

Towards Independent Assisted Living: The Application of Intelligent Context-Aware Systems .....	1180
<i>Philip Moore, Cain Evans, and George Tadros</i>	
Implementation of a FIPA Compliant BDI Agent Platform in .NET: CloudNetBDI 1.0 .....	1186
<i>C. Evans and S. Abu Rmeileh</i>	
iMAS: An Intelligent Mobile Advertising System: Development and Implementation .....	1192
<i>C. Evans, P. Moore, A.M. Thomas, and O. Pavlemko</i>	
eMonitoring for eHealth: Research Projects for Assisted Living .....	1197
<i>A.M. Thomas, C. Evans, P. Moore, M. Sharma, A. Patel, H. Shah, P. Chima, S. Abu Rmeileh, G. Dubb, and R. Bhana</i>	

## **The International Workshop on Cloud Computing: Project and Initiatives (CCPI 2013)**

### **Session 1: Cloud Projects**

A Cloud-Based Framework for Collaborative Data Management in the VPH-Share Project .....	1203
<i>Siegfried Benkner, Chris Borckholder, Marian Bubak, Yuriy Kaniovskiy, Richard Knight, Martin Koehler, Spiros Koulouzis, Piotr Nowakowski, and Steven Wood</i>	
Integrating Structured Peer-to-Peer Networks Into OM4SPACE Project .....	1211
<i>Irina Astrova, Arne Koschel, Leonard Renners, Thomas Rossow, and Marc Schaaf</i>	
COMPOSE — A Journey from the Internet of Things to the Internet of Services .....	1217
<i>Benny Mandler, Fabio Antonelli, Robert Kleinfeld, Carlos Pedrinaci, David Carrera, Alessio Gugliotta, Daniel Schreckling, Iacopo Carreras, Dave Raggett, Marc Pous, Carmen Vicente Villares, and Vlad Trifa</i>	

## **Session 2: Cloud Programming and Management**

Programming Ecological Niche Modeling Workflows in the Cloud .....	1223
<i>Daniele Lezzi, Roger Rafanell, Erik Torres, Renato De Giovanni, Ignacio Blanquer, and Rosa M. Badia</i>	
From Cloud Governance to IoT Governance .....	1229
<i>Adrian Copie, Teodor-Florin Fortis, Victor Ion Munteanu, and Viorel Negru</i>	
A Proposal of a Simulation-Based Approach for Service Level Agreement in Cloud .....	1235
<i>Massimiliano Rak, Antonio Cuomo, and Umberto Villano</i>	
Multi-objective Decision Support for Brokering of Cloud SLA .....	1241
<i>Alba Amato and Salvatore Venticinque</i>	

## **Session 3: Semantics in Cloud**

A Semantic Registry for Cloud Services .....	1247
<i>Cristina Mîndruta and Teodor-Florin Fortis</i>	
Semantic and Agent Technologies for Cloud Vendor Agnostic Resource Brokering .....	1253
<i>Alba Amato, Giuseppina Cretella, Beniamino Di Martino, and Salvatore Venticinque</i>	
A Framework for Semantic Interoperability over the Cloud .....	1259
<i>Flora Amato, Antonino Mazzeo, Vincenzo Moscato, and Antonio Picariello</i>	

## **The First International Workshop on Pervasive Internet of Things and Smart Cities (PITSaC 2013)**

### **Session 1: Management and Governance of Smart Cities**

Scripting a Smart City: The CityScripts Experiment in Santander .....	1265
<i>Davide Carboni, Antonio Pintus, Andrea Piras, Alberto Serra, Atta Badii, and Marco Tiemann</i>	
A Living Smart City: Dynamically Changing Nodes Behavior through over the Air Programming .....	1271
<i>Jose A. Galache, Pablo Sotres, Juan R. Santana, Veronica Gutierrez, Luis Sanchez, and Luis Muñoz</i>	
Architecture for Smart Highway Real Time Monitoring .....	1277
<i>Félix Jesús Villanueva, Javier Albusac, Luis Jiménez, David Villa, and Juan Carlos López</i>	

### **Session 2: Semantic Web, Visualization, Interoperability, and Interaction**

A Unified View on Data Path Aspects for Sensing Applications at a Smart City Scale .....	1283
<i>Vangelis Gazis, Martin Strohbach, Navot Akiva, and Maximilian Walther</i>	
Semantic-Based Knowledge Dissemination and Extraction in Smart Environments .....	1289
<i>Michele Ruta, Floriano Scioscia, Eugenio Di Sciascio, Domenico Rotondi, and Salvatore Piccione</i>	
RFID Tracking for Urban Transportation Using EPCGlobal-based WebServices .....	1295
<i>José I. San Jose, José M. Pastor, R. Zangróniz, and Juan J. de Dios</i>	
Enabling Participative Marketing through the Internet of Things .....	1301
<i>Antonio J. Jara, Antonio F. Skarmeta, and María Concepción Parra</i>	

### **Session 3: Novel Protocols and Benchmarking for Smart Cities**

Design of Geographically Aggregatable Address and Routing Toward Location Based Multicast .....	1307
<i>Kazuya Okada, Takeshi Okuda, and Suguru Yamaguchi</i>	
An Extended Topic-Based Pub/Sub Broker for Cooperative Mobile Services .....	1313
<i>Augusto Morales, Ramon Alcarria, Edwin Cedeño, and Tomas Robles</i>	
Benchmarking Internet of Things Deployments in Smart Cities .....	1319
<i>Franck Le Gall, Sophie Vallet Chevillard, Alex Gluhak, and Zhang Xueli</i>	
Mobile Digcovery: A Global Service Discovery for the Internet of Things .....	1325
<i>Antonio J. Jara, Pablo Lopez, David Fernandez, Jose F. Castillo, Miguel A. Zamora, and Antonio F. Skarmeta</i>	

### **Session 4: Security and Ambient Assisted Environments in IoT**

HIP Security Architecture for the IP-Based Internet of Things .....	1331
<i>Francisco Vidal Meca, Jan Henrik Ziegeldorf, Pedro Moreno Sanchez, Oscar Garcia Morchon, Sandeep S. Kumar, and Sye Loong Keoh</i>	
Differential Elliptic Point Addition in Twisted Edwards Curves .....	1337
<i>Leandro Marin</i>	
Towards Ambient Assisted Cities and Citizens .....	1343
<i>Diego López-de-Ipiña, Bernhard Klein, Sacha Vanhecke, and Jorge Pérez-Velasco</i>	
Survey of Internet of Things Technologies for Clinical Environments .....	1349
<i>Pablo López, David Fernández, Antonio J. Jara, and Antonio F. Skarmeta</i>	

### **Session 5: Smart Cities and Internet of Things Applications**

Validating a Business Model Framework for Smart City Services: The Case of FixMyStreet .....	1355
<i>Nils Walravens</i>	
Building Automation and Smart Cities: An Integration Approach Based on a Service-Oriented Architecture .....	1361
<i>Markus Jung, Jürgen Weidinger, Wolfgang Kastner, and Alex Olivieri</i>	
A Variability Model for Template Personalization in Mobile Prosumer Environments .....	1368
<i>Ramón Alcarria, Tomás Robles, Augusto Morales, Sergio González-Miranda, and Daniel Caballero</i>	
Smart Lighting Solutions for Smart Cities .....	1374
<i>Miguel Castro, Antonio J. Jara, and Antonio F.G. Skarmeta</i>	

### **Session 6: Parking and Intelligent Transport System Applications**

Parking Easier by Using Context Information of a Smart City: Enabling Fast Search and Management of Parking Resources .....	1380
<i>Juan Rico, Juan Sancho, Bruno Cendon, and Miguel Camus</i>	
Extension of the ITS Station Architecture to Low-Power Pervasive Sensor Networks .....	1386
<i>László Virágg, József Kovács, and András Edelmayer</i>	

Improving Service Quality for Parking Lot Users Using Intelligent Parking Reservation Policies .....	1392
<i>Nikolaos Doulamis, Eftychios Protopapadakis, and Lambros Lambrinos</i>	

## **The First International Workshop on Engineering Object-Oriented Parallel Software (EOOPS 2013)**

### **Session 1: Accelerators and GPU Computing**

Evaluation of Java for General Purpose GPU Computing .....	1398
<i>Jorge Docampo, Sabela Ramos, Guillermo L. Taboada, Roberto R. Expósito, Juan Touriño, and Ramón Doallo</i>	
Object Support for OpenMP-style Programming of GPU Clusters in Java .....	1405
<i>Carolin Wolf, Georg Dotzler, Ronald Veldema, and Michael Philippsen</i>	
A Multi-GPU Framework for In-Memory Text Data Analytics .....	1411
<i>Poh Kit Chong, Ettikan K. Karuppiah, and Keh Kok Yong</i>	

### **Session 2: MPI and Algorithms**

Promoting Data-Centric Supercomputing to the WWW World: Open MPI's Java Bindings .....	1417
<i>Alexey Cheptsov</i>	
CUDA Powered User-Defined Types and Aggregates .....	1423
<i>Marcin Gorawski, Michal Lorek, and Anna Gorawska</i>	
Distributed Gröbner Bases Computation with MPJ .....	1429
<i>Heinz Kredel</i>	
Straightforward Parallelization of Polynomial Multiplication Using Parallel Collections in Scala .....	1436
<i>Raphaól Jolly</i>	

## **The First International Workshop on Network Management and Monitoring (NetMM 2013)**

### **Session 1: Network and Service Monitoring**

Passive Testing on Performance Requirements of Network Protocols .....	1439
<i>Xiaoping Che and Stephane Maag</i>	
Adkintun: SLA Monitoring of ISP Broadband Offerings .....	1445
<i>Javier Bustos-Jiménez, Victor Ramiro, Felipe Lalanne, and Tomás Barros</i>	
An Effective Attack Detection Approach in Wireless Mesh Networks .....	1450
<i>Felipe Barbosa Abreu, Anderson Morais, Ana Cavalli, Bachar Wehbi, and Edgardo Montes de Oca</i>	

### **Session 2: Management of Distributed Systems and Network**

Enabling IPTV Service Assurance Using OpenFlow .....	1456
<i>Patrick McDonagh, Cristian Olariu, Adriana Hava, and Christina Thorpe</i>	
A Study on a Distributed Rerouting Scheme .....	1461
<i>Iilir Shinko, Yoann Foquet, and Dritan Nace</i>	

Encrypted Incremental Backup without Server-Side Software .....	1467
<i>Shih-Yu Lu</i>	
Modeling and Evaluation of Machine Learning Based Network Management System for NGN .....	1473
<i>Abul Bashar</i>	

## **The First International Workshop on Social Media and Mobility in Enterprises (SMME 2013)**

### **Session 1: Social Media and Mobile Services in Enterprises**

Usage of Social Media for External Stakeholder Relationship Management—A Study of German Companies and International Non-government Organizations .....	1479
<i>Nina Krüger, Linh Dang-Xuan, Anna-Maria Schneider, and Stefan Stieglitz</i>	
Adoption of Social Media for Internal Usage in a Global Enterprise .....	1483
<i>Stefan Stieglitz, Siegfried Schallenmüller, and Christian Meske</i>	
Accessing Knowledge with a Game—A Meta-analysis of Prediction Markets .....	1489
<i>Christian W. Scheiner, Philipp Haas, Niklas Leicht, and Kai-Ingo Voigt</i>	
Specification of mCRM Enterprise Applications to Support IT-Consultants .....	1495
<i>Tobias Brockmann and Stefan Stieglitz</i>	

## **The International Workshop on Bioinformatics and Life Science Modeling and Computing (BLSMC 2013)**

### **Session 1: Bioinformatics and Life Science Modeling and Computing**

MitomiRs and Energetic Regulation .....	1501
<i>J. Demongeot, O. Cohen, A. Doncescu, and A. Henrion-Caude</i>	
MicroRNAs: Unspecific Inhibitory Regulation in Immunologic Control and in Mitochondrial Respiration .....	1509
<i>J. Demongeot, H. Hazgui, and N. Villerme</i>	
Data Mining Based Analysis of Genomic Location Shifts of Conserved Annotated miRNA Genes gives Preliminary Insights on Molecular Network Evolution .....	1517
<i>Frederic Michon</i>	
Dynalets: A New Representation of Periodic Biological Signals and Spectral Data .....	1525
<i>J. Demongeot, A. Hamie, A. Glaria, and C. Taramasco</i>	
Information Design of Biological Networks: Application to Genetic, Immunologic, Metabolic and Social Networks .....	1533
<i>J. Demongeot, H. Pempelfort, J.M. Martinez, R. Vallejos, M. Barria, and C. Taramasco</i>	

# The First International Workshop on Energy-Aware Systems, Communications, and Security (EASyCoSe 2013)

## Session 1: Secure Systems

A Case for Energy-Aware Security Mechanisms .....	1541
<i>Xun Li and Frederic T. Chong</i>	
Energy Consumption Simulation of Different Distributed Intrusion Detection Approaches .....	1547
<i>Mauro Migliardi and Alessio Merlo</i>	
Digital Watermarking Techniques and Security Issues in the Information and Communication Society .....	1553
<i>Jordi Nin and Sergio Ricciardi</i>	

## Session 2: Grid and Distributed Systems

Decentralized Consensus Protocols: The Enabler for Smarter Grids Monitoring .....	1559
<i>Antonio Iacoviello, Vincenzo Loia, Antonio Pietrosanto, and Alfredo Vaccaro</i>	
Modeling Energy Savings for Job Migration in Grid Environments .....	1565
<i>Antonella Galizia, Mark Yampolskiy, Michael Schiffers, Alfonso Quarati, and Andrea Clematis</i>	
CPNoC: An Energy-Efficient Photonic Network-on-Chip .....	1571
<i>Junhui Wang, Gang Han, Baoliang Li, Jia Lu, and Wenhua Dou</i>	
Smart Distributed System Architecture for Green Communications .....	1577
<i>Anna Vizziello and Lorenzo Favalli</i>	

## Session 3: Wireless and Mobile Networks

Energy Consumption of the Mobile Wireless Sensor Network's Node with Controlled Mobility .....	1582
<i>Konstantin Mikhaylov and Jouni Tervonen</i>	
Estimation of the Energy Consumption of Mobile Sensors in WSN Environmental Monitoring Applications .....	1588
<i>Maurizio D'Arienzo, Mauro Iacono, Stefano Marrone, and Roberto Nardone</i>	
Energy Efficient Double Cluster Head Routing Scheme in a City Vehicular Network .....	1594
<i>Hamdi Idjmayyel, Bilal R. Qazi, and Jaafar M.H. Elmirghani</i>	
Reducing Energy Cost of Keepalive Messages in 3G Mobiles .....	1600
<i>Mohamed Oulmahdi, Christophe Chassot, and Ernesto Exposito</i>	

## Session 4: Data Centers and Algorithms

Cluster Head Assignment in Networks Controlled by Gateway Entities (CHANGE): Simulation Analysis of Protocol Performance .....	1606
<i>Juan Rico, Javier Valiño, and Edgar Epifanio</i>	
An Extension of the Link Layer Discovery Protocol for On-Demand Power Supply Network by PoE .....	1612
<i>Masaya Yokohata, Tomotaka Maeda, and Yasuo Okabe</i>	



All Silicon Data Center, the Energy Perspectives .....1617  
*Antonio Scarfò*

Energy-Aware Cache Management for Content-Centric Networking .....1623  
*Satoshi Imai, Kenji Leibnitz, and Masayuki Murata*

## **Session 5: Job Scheduling and Environment Sensing**

Smart Outlet Network for Energy-Aware Services Utilizing Various Sensor Information .....1630  
*Naoyuki Morimoto, Yuu Fujita, Masaaki Yoshida, Hiroyuki Yoshimizu, Masafumi Takiyamada,  
Terukazu Akehi, and Masami Tanaka*

The Potential of Energy/Utility-Accrual Scheduling .....1636  
*Marcus Hähnel, Marcus Völp, Björn Döbel, and Hermann Härtig*

Deriving Job Completion Reliability and Job Energy Consumption for a General MapReduce  
Infrastructure from Single-Job Perspective .....1642  
*Jia-Chun Lin, Fang-Yie Leu, Ming-Chang Lee, and Ying-Ping Chen*

## **Author Index**