Advance Program

IEEE FiCloud 2016
The IEEE 4th International Conference on Future Internet of Things and Cloud

MobiWis 2016
The 13th International Conference on Mobile Web and Intelligent Information Systems
Lecture Notes in Computer Science (LNCS), Springer

OBD 2016
The 2nd International Conference on Open and Big Data
IEEE-CS TCI

Co-located Symposia/Workshops:
ICI, BigDataR&I, MobiApps, PMECT, SNAMS, EMSICCC, SITA, ABA, AWMA

22-24 August 2016
Vienna, Austria

With Support of: University of Vienna, Austria
KEYNOTE TALK I

The IPv6-based IoT and Cloud Computing Enabling Advanced Innovations for Vibrant Ecosystems

Latif LADID
University of Luxembourg
Luxembourg

Abstract:
The public IPv4 address space managed by IANA (http://www.iana.org) has been completely depleted by Feb 1st, 2011. This creates by itself a critical challenge when adding new things and enabling new services on the Internet. Without publicly routable IP addressing, the Internet of Things and anything that’s part of Internet of Everything would be greatly reduced in its capabilities and limit its potential success. Most discussions about IoT have been based on the illusionary assumption that the IP address space is an unlimited resource or it’s even taken for granted that IP is like oxygen produced for free by nature. The adoption of IPv6 provide enhanced features that were not tightly designed or scalable in IPv4 like autoconfig, IP mobility, ad hoc services; etc catering for the extreme scenario where IP becomes a commodity service enabling lowest cost networking deployment of large scale sensor networks, RFID, IP in the car, to any imaginable scenario where networking adds value to commodity. IPv6 deployment is now in full swing with some countries achieving over 50% penetration such as Belgium or the US with some 75 M users powered by IPv6 without even the users knowing it. Recently, Apple has required its apps developers to use IPv6 only for their apps staring June 1, 2016 which gives a great shot in the arm of IPv6. There are many inflections points happening this decade to influence the design of first tangible IoT, 5G and Smart Cities. It will be a combination of IoT, SDN-NFV, Cloud Computing, Edge Computing, Big IoT Data and 5G to shift through to realising the paradigm shift from current research-based work to advanced IoT, 5G and Smart Cities. This talk will be devoted to analyze the transformative industrial and societal impact of IPv6 on the potential mix of IPv6-based IoT, SDN-NFV, Cloud Computing, Big Data and 5G and its advanced features, highlighting the challenges and solutions moving forward.

Biography:
Prof. Latif Ladid is the Founder & President of the IPv6 FORUM (www.ipv6forum.org) and the Founding Chair of the 5G World Alliance (http://www.5gworldalliance.org/). He is the Chair of the ETSI IPv6 Industry Specification Group (https://portal.etsi.org/tb.aspx?tbid=827&SubTB=827) and the Chair of the IEEE ComSoC IoT sub-committee. Prof Ladid is the Chair of the IEEE ComSoC 5G sub-committee the Vice Chair of the IEEE ComSoC SDN-NFV sub-committee. He is the Emeritus Trustee of the Internet Society - ISOC (www.isoc.org), IPv6 Ready & Enabled Logos Program Board (www.ipv6ready.org), World summit Award Board Member (www.wsis-award.org) and the Research Fellow at University of Luxembourg on multiple European Commission Next Generation Technologies IST Projects. He is also a member of 3GPP PCG Board (www.3gpp.org), 3GPP2 PCG (www.3gpp2.org), UN Strategy Council, and the Future Internet Forum EU Member States (representing Luxembourg).
KEYNOTE TALK II

Intelligent Systems for Healthy Cities

Agnis Stibe
MIT Media Lab
Massachusetts Institute of Technology, USA

Abstract:
Quality of life in cities can be improved through reshaping and advancing urban spaces with persuasive mobile and socially influencing strategies, thus empowering communities to succeed in achieving sustainable wellbeing. This vision aims at helping people to acquire healthy and sustainable everyday routines through intelligent urban interventions that facilitate health behavior change at scale. Ultimately, this research seeks to create socially engaging environments supporting wellbeing and innovation through reshaping behavioral patterns, intelligent outdoor sensing, interactive public feedback channels, designing responsive neighborhoods, and fostering adoption of novel experiences in future cities.

Biography:
Dr. Agnis Stibe is a social engineer at the MIT Media Lab. In his recent TEDx talk, Dr. Stibe envisions future persuasive cities that encourage healthy and sustainable routines. His research is built upon socio-psychological theories to design Socially Influencing Systems (SIS) for health behavior change at scale. Dr. Stibe frequently speaks at conferences and effectively collaborates with industry. He has worked for a number of multinational companies, including Hewlett-Packard, Oracle, and First Data. Dr. Stibe has twice been recognized from the Minister of Education and Science for his long-term creative work. He holds a master’s degree in computer science, an MBA, and a PhD on SIS.
MONDAY 22 AUGUST 2016

08:00 AM:  Registration

9:00-9:30  Conference Opening (Room: Edison)

09:30-10:30  Plenary Session: Keynote I

The IPv6-based IoT and Cloud Computing Enabling Advanced Innovations for Vibrant Ecosystems
   Latif LADID, University of Luxembourg
Session Chair: Michel Kadoch, ETS, Canada
Room: Edison

10:30-11:00  Coffee Break

11:00-12:30  Parallel Sessions

FiCloud Session 1: Software Architecture and Middleware
Session Chair: Said Tazi, LAAS, CNRS, France
Room: Edison

CacheL-A Cache Algorithm using Leases for Node Data in the Internet of Things
   David Tracey and Cormac Sreenan
Building Models of Installations to Recommend Applications in IoT Software Ecosystems
   Matúš Tomlein and Kaj Grønbæk
A Disruption-Tolerant RESTful Support for the Web of Things
   Nicolas Le Sommer, Lionel Touseau, Yves Mahéo, Maël Auzias and Frédéric Raimbault
A Metric to Estimate Resource Use in Cloud-based Videoconferencing Distributed Systems
   Alvaro Alonso, Ignacio Aguado, Joaquín Salvachúa Rodríguez and Pedro Rodriguez Perez
Negotiation based scheduling for an efficient SaaS provisioning in the Cloud
   Aya Omezzine, Bellamine Ben Saoud Narjes, Said Tazi and Gene Cooperman

FiCloud Session 2: Cloud and Network Services
Session Chair: Natalia Kryvinska, University of Vienna
Room: Watt

Building Media-Rich Cloud Services from Network-Attached I/O Devices
   Ilija Hadzic, Martin D. Carroll, Michael J. Coss and Hans C. Woithe
Exploiting Virtualization and Sporadic Clouds for collaborative downloading in VANETs - A new Networking as a Service
    Esteban Ordóñez, Jack Bravo, Yolanda Blanco, Martín López, Víctor Saiáns and José Pazos
Supersensors: Raspberry Pi Devices for Smart Campus Infrastructure
    Kristian Hentschel, Dejice Jacob and Jeremy Singer
Pricing Ontology for Task-Oriented Cloud Sourcing
    Richard Greenwell, Xiaodong Liu and Kevin Chalmers
Shaping decision-making on Cloud Services application in business processes
    Nikita Konovalov and Nikolay Kazantsev

MobiWis Session 1: Mobile Web - Practice and Experience
Session Chair: Thanh Van Do, Telenor Research and Norwegian University of Science & Technology
Room: Tesla
An Android Kernel Extension to Save Energy Resources without Impacting User Experience
    Luis Corral, Ilenia Fronza, Nabil El Ioini, Andrea Janes, and Peter Plant
Mobile Soundscape Mixer – Ready for Action
    Kari Salo, Merja Bauters and Tommi Mikkonen
Onde Chiare: A Mobile Application to Mitigate the Risk Perception from Electromagnetic Fields
    Katiuscia Mannaro and Marco Ortu
Ringtone Adaptation Based on Location and Surrounding Noise
    Petr Mervart, Jan Dvorak, Ondrej Krejcar
Loop speed trap data collection method for an accurate short-term traffic flow forecasting
    Sahraoui Abdelatif, Derdour Makhlouf, Philippe Roose and Bektache Djamel

12:30-13:30     Lunch

13:30-15:00     Parallel Sessions

FiCloud Session 3: Security and Privacy I
Session Chair: Indrakshi Ray, Colorado State University
Room: Edison
Private Aggregation Scheme based on Erasable Data-hiding in Wireless Sensor Networks
    Weini Zeng, Peng Chen, Yeqing Yi and Jianzhong Zhou
Survey of Intrusion Detection Systems towards an End to End Secure Internet of Things
    Audrey Gendreau and Michael Moorman
Detection of Malicious Portable Executables using Evidence Combinational Theory with Fuzzy Hashing
   *Anitta Patience Namanya, Qublai Khan Ali Mirza, Hamad Al-Mohannadi, Irfan Awan and Jules Ferdinand Pagna Disso*

Practical and Secure IoT Device Authentication using Physical Unclonable Functions
   *John Ross Wallrabenstein*

A Quorum RFID System Using Threshold
   *Ayad Al-Adhami, Marcel Ambroze, Colin Cristopher, Ingo Stengel and Martin Tomlinson*

**MobiWis Session 2: Advanced Web and Mobile Systems**

Session Chair: Tor-Morten Grønli, Westerdals Oslo ACT
Room: Tesla

Computational Thinking through Mobile Programming: A Case Study in a Liberal Education Context
   *Ilenia Fronza, Nabil El Ioini and Luis Corral*

Realistic Offloading Scheme for Mobile Cloud Computing
   *Hamid Jadad, Abderezak Touzene, Nasser Al-Zeidi, Khaled Day and Bassel Arafeh*

Model Driven Development Approaches for Mobile Applications: A Survey
   *Eric Umuhoza and Marco Brambilla*

Fuzzy Ontology Based Model for Image Retrieval
   *Madiha Liaqat, Sharifullah Khan and Muhammad Majid*

Face-Based Difficulty Adjustment for the Game Five in a Row
   *Jan Novotny, Jan Dvorak, Ondrej Krejcar*

**SNAM Session 1: Social Media 1**

Session Chair: Rehab Duwairi, Jordan University of Science and Technology
Room: Watt

Human Acceptance of Autonomous Social Media Agent
   *Hafiza Basserat Fatima, Syed Waqar Ul Qounain Jaffry, Mian Mubasher and Muhammad Anas Khan Sherwani*

Towards Automatic Persona Generation Using Social Media
   *Jisun An, Ho Youn Cho, Haewoon Kwak, Mohammed Ziyaad Hassen and Bernard Jansen*

AffinityFinder: A System for Deriving Hidden Affinity Relationships on Twitter Utilizing Sentiment Analysis
   *Abdelmounaam Rezgui, Daniel Fahey and Ian Smith*

Correlation of weather and moods of the Italy residents trough an analysis of their tweets
   *Gianfranco Modoni and Davide Tosi*
15:00-15:30  Coffee Break

15:30-17:00  Parallel Sessions

**FiCloud Session 4: Security and Privacy II**
Session Chair: Michael Moorman, Saint Leo University
Room: Edison
A Secure Network Architecture for the Internet of Things Based on Local Authorization Entities
  *Hokeun Kim, Armin Wasicek, Benjamin Mehne and Edward A. Lee*
Russian Model of Public Keys and Validation Infrastructure as Base of the Cloud Trust
  *Melnikov Dmitriy Anatolievich, Durakovskiy Anatoliy Petrovich, Gorbatov Viknor Sergeevich, Ivanenko Vitaliy Grigorievich and Modestov Alexey Albertovich*
Security Operations Centers for Information Security Incident Management
  *Natalia Miloslavskaya*
Policy Engine as a Service (PEaaS): An Approach to a Reliable Policy Management Framework in Cloud Computing Environments
  *Faraz Fatemi Moghaddam, Philipp Wieder and Ramin Yahyapoor*
Social Engineering Attack Strategies and Defence Approaches
  *Ahmad Alhejailan, Ibrahim Ghafir and Mohammad Hammoudeh*

**MobiWis Session 3: Security of Mobile Applications**
Session Chair: Ondrej Krejcar, University of Hradec Kralove
Room: Tesla
Adaptive Trust Scenarios for Mobile Security
  *Serif Bahtiyar, Orhan Ermis and Mehmet Ufuk Caglayan*
Access control approach in development of mobile applications
  *Aneta Poniszewska-Maranda and Aneta Majchrzycka*
Using mobile technology in national identity registration
  *Thanh Van Do, Clark Swafford, Loc H. Khuong, Van Thuan Do and Boning Feng*
Strengthening mobile network security using machine learning
  *Van Thuan Do, Paal Engelstad, Boning Feng and Thanh Van Do*
Secured Authentication Using Anonymity and Password-Based Key Derivation Function
  *Mohd Izuan Mohd Saad, Kamarularifin Abd Jalil and Mazani Manaf*
**SNAMS Session 2: Social Media 2**  
Session Chair: Muhannad Quwaider, Jordan University of Science & Technology  
Room: Watt  
A Social Network Analysis of tweets during the Gaza War, Summer 2014  
Wael Al Sarraj, Ashraf Maghari, Mahmoud Abu-Ghosh and Khalid Kahloot  
Using a Rich Context Model for Real-Time Big Data Analytics in Twitter  
Alisa Sotsenko, Marc Jansen, Marcelo Milrad and Juwel Rana  
Social Networks Benchmark Dataset for Diseases Classification  
Muhannad Quwaider and Mosab Alfaqeeh  
Using Dynamic 1 to Speed-Up Clustering-Based Community Detection In Social Networks  
Mohammed Alandoli, Mahmoud Al-Ayyoub, Yaser Jararweh and Mohammad Al-Smadi

**17:00-18:30 Parallel Sessions**

**FiCloud Session 5: Software-defined Networking and Cloud**  
Session Chair: Samia Bouzefrane, INRIA, France  
Room: Edison  
The Design of Traffic-aware Intelligent Control System on Software-Defined Cloud Networking  
Ji-Young Kwak, Chunglae Cho, SaeHoon Kang, YongYoon Shin, Soo-Myung Pahk  
Flow Based Security for IoT Devices using an SDN Gateway  
Peter Bull, Ron Austin, Evgenii Popov, Mak Sharma and Richard Watson  
SDCache: Software Defined Data Caching Control for Cloud Services  
Ala Darabseh, Nikolaos Freris, Yaser Jararweh and Mahmoud Al-Ayyoub  
Markus Ullrich, Joerg Laessig and Martin Gaedke  
New Communicating Concrete for Data Storage and Retrieval through Integrated Micro Sensor Nodes  
Kais Mekki, William Derigent, Eric Rondeau and André Thomas

**Session: SITA Workshop**  
Session Chair: Kai Jakobs, RWTH Aachen University  
Room: Tesla  
An investigation on the M2M/IoT trajectory and its relationship with formal standards  
Dong-hyu Kim & Heejin Lee
IoT standardization. The approach in the field of data protection as a model for ensuring compliance of IoT applications?

*Kees Stuurman, U. Tilburg*

Humans are Back in the Loop! Would Technology Related Ethics Support the Design, Operating and Standardization of Safe, Secure and Efficient Human-Machine-Collaboration?

*Hartwig Steusloff, Fraunhofer IOSB*

Standardisation of (Emerging) IoT-Applications: Past, Present and Glimpse into the Future

*Kai Jakobs*

**SNAMS Session 3: Security, Data and Semantics**

Session Chair: Rehab Duwairi, Jordan University of Science and Technology

Room: Watt

Exploring Research Networks with Data Science - A Data-Driven Microservice Architecture for Synergy Detection

*Thomas Thiele, Thorsten Sommer, Sebastian Stiehm, Sabina Jeschke and Anja Richert*

Microblogging Hash Tag Recommendation System Based on Semantic TF-IDF

*Mir Saman Tajbakhsh and Jamshid Bagherzadeh*

An Intelligent Model for Vulnerability Analysis of Social Media User

*Firya Rashid Abubaker and Pinar Sarisaray Boluk*

The Black Mark Beside My Name Server: Exploring the Importance of Name Server IP Addresses in Malware DNS Graphs

*Jukka Ruohonen, Sanja Scepanovic, Sami Hyrynsalmi, Igor Mishkovski, Tuomas Aura and Ville Leppänen*

<table>
<thead>
<tr>
<th>19:30-21:30</th>
<th>Reception Party</th>
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<tbody>
<tr>
<td></td>
<td>(at Hotel Park Royal Palace - conference venue)</td>
</tr>
</tbody>
</table>
**TUESDAY 23 AUGUST 206**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00-10:30</td>
<td>Plenary Session: Keynote II</td>
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<tr>
<td></td>
<td>Intelligent Systems for Healthy Cities</td>
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<td></td>
<td><em>Agnis Stibe, Massachusetts Institute of Technology, USA</em></td>
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<td>Session Chair: Christine Strauss, University of Vienna</td>
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<td>Room: Edison</td>
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<tr>
<td>10:30-11:00</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>11:00-12:30</td>
<td>Parallel Sessions</td>
</tr>
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**FiCloud Session 6: Networking and Communication Protocols**

Session Chair: Peter Bull, Birmingham City University

Room: Edison

Robust Uplink Resource allocation in LTE Networks With M2M Devices as an Infrastructure of Internet of Things  
*Mohammad Reza Mardani, Salman Mohebi and Hossein Bobarshad*

Hello-Based Link Failure Detection Analysis in Wireless Mesh Networks  
*Tareq Hayajna and Michel Kadoch*

Retransmission Schemes for Lossless Transparent Optical Packet Switching in Large-scale Datacentre Networks  
*Jingyan Wang, Conor McArdle and Liam Barry*

A Cluster-Based Life-Time Routing Protocol in VANET  
*Ahmad Abuashour and Michel Kadoch*

**MobiWis Session 4: Mobile and Wireless Networking**

Session Chair: Serif Bahtiyar, Boğaziçi University

Room: Tesla

Optimal Resource Allocation for Non-Real Time Visible Light Communication Networks  
*Fabian Seguel, Pablo Adasme, Ismael Soto and Belarmino Núñez*

On Information Sharing Scheme for Automatic Evacuation Guiding System Using Evacuees' Mobile Nodes  
*Nobuhisa Komatsu, Masahiro Sasabe and Shoji Kasahara*

Cognitive Downlink Interference LTE femtocell  
*Nahla NurElmadina, Ibtehal Nafea, Nuha Bihary*

Correlation Properties of QOCCC based on 1D-CCC with Parameters (N, N, 2N) and (N, N, N)  
*Monika Dávideková and Michal Greguš Ml.*
Heterogeneous Traffic Modeling and Analysis for Wireless Sensor Networks
Hamida Ali and Sayeed Sayeed Ghani

DUCO: Hybrid Indoor Navigation
Can Surmeli and Tacha Serif

**OBD Session 1: Big and Open Data Systems**
Session Chair: Zaher Al Aghbari, University of Sharjah
Room: Watt

Evaluating the Scaling of Graph-Algorithms for Big Data using GraphX
*Jakob Andersen and Olaf Zukunft*

Mining Social Capital on Online Social Networks with Strong and Weak Ties
*Swapna Gokhale and Huda Alhazmi*

Measures for assessing the data freshness in OpenData portals
*Sebastian Neumaier and Jürgen Umbrich*

MedRec: Using Blockchain for Medical Data Access and Permission Management
*Asaph Azaria, Ariel Ekblaw, Thiago Vieira and Andrew Lippman*

Mining Semantic Location History for Collaborative POI recommendation in Online Social Networks
*Luepol Pipanmaekaporn and Suwatchai Kamolsantiroj*

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12:30-13:30 Lunch

13.30-15:00 Parallel Sessions

**FiCloud Session 7: Context-aware and Smart Environment**
Session Chair: Fano Ramparany, Orange, France
Room: Edison

Towards a software framework for the autonomous internet of things
*Marco E. Perez Hernandez and Stephan Reiff-Marganiec*

Exploiting Data Analytics for Home Automation Service
*Fano Ramparany, Marceau Thalgott and Sébastien Bolle*

Survey: Toward A Smart Campus Using the Internet of Things
*Abdullah Alghamdi and Sachin Shetty*

Improving the smart environment for control systems of earth-moving and construction machines
*Tatyana Golubeva, Evgeniy Zaytcev and Sergey Konshin*

Mobile Multi-Agent Systems for the Internet-of-Things and Clouds using the JavaScript Agent Machine Platform and Machine Learning as a Service
*Stefan Bosse*
MobiWis Session 5: Personalization and Social Networks
Session Chair: Natalia Kryvinska, University of Vienna
Room: Tesla
Impact of Individual Differences on the Use of Mobile Phones and Applications
   Perin Ünal, Tuğba Taşkaya Temizel, and P. Erhan Eren
Smart Solution in Social Relationships Graphs
   Ales Berger and Filip Maly
A Context-based Personalization for Mobile Applications’ Network Access
   Yaser Mowafi, Tareq Aqarbeh and Rami Azrai
Group assist recommendation model based on intelligent mobile terminals - GARMIT
   Han Lansheng, Sun Changhua, Qian Mengxiao, Han Shuxia and Kwisaba Hamza
A Smart Arduino Alarm Clock Based on NREM and REM Sleep Stage Detection
   Adam Drabek, Ondrej Krejcar, Kamil Kuca

OBD Session 2: Analysis and Classification of Big Data
Session Chair: Jürgen Umbrich, Vienna University of Economics & Business
Room: Watt
Cloud-based Data Analysis of User Side in Smart Grid
   Yuanyuan Sun, Jingjing Yuan and Mingyue Zhai
Discovering Contrast Sets for Efficient Classification of Big Data
   Zaher Al Aghbari and Imran Junejo
Utilizing big data analysis for diseases prevention and control during Hajj
   Ibtehal Nafea
Measuring Fuzzy Atomicity for Composite Service Execution
   Yudith Cardinale, Joyce El Haddad, Maude Manouvrier, Marta Rukoz

15:00-15:30  Coffee Break

15:30-17:00  Parallel Sessions

Session: ABA Workshop
Session Chair: Soraya Kouadri Mostéfaoui, The Open University
Room: Edison
Generational Garbage Collection Algorithm Based on Lifespan Prediction
   Xin Ren, Xuying Zhang and Yuan Song
Spar(k)ql: SPARQL evaluation method on Spark GraphX
   Gergő Gombos, Gábor Rácz and Attila Kiss
Data Modeling and Case-based Reasoning for Social Monitoring
   Hadi Hashem and Daniel Ranc

**BigDataR&I Session 1: Big Data Research and Innovation 1**

Session Chair: Muhammad Younas, Oxford Brookes University
Room: Tesla

Survey of Big Data Information Security
   Natalia Miloslavskaya and Aida Makhmudova.
Investigating metrics to build a benchmark tool for complex event processing systems
   André L. S. Gradvohl
Application of Big Data, Fast Data and Data Lake Concepts to Information Security Issues
   Natalia Miloslavskaya and Alexander Tolstoy

**OBD Session 3: Big and Open Data Applications**

Session Chair: Maude Manouvrier, Université Paris-Dauphine
Room: Watt

Characteristics of Open Data CSV Files
   Johann Mitlohner, Sebastian Neumaier, Jurgen Umbrich, Axel Polleres
Open Data Portal, a Technical Enabler to Drive Innovation in Namibia
   Lameck Mbangula Amugongo, Shawulu Nggada and Jürgen Sieck
Managing and Storing Function Results in Temporal Approach
   Michal Kvet and Karol Matiasko
Towards a Reference Architecture for Trusted Data Marketplaces
   Dumitru Roman and Stefano Gatti
Software Application Logging: Aspects to Consider by Implementing Knowledge Management
   Monika Dávideková and Michal Greguš Ml

**17:00-18:30 Parallel Sessions**

**Session: EMSICCC Workshop**

Session Chair: Samia Bouzefrane, INRIA, France
Room: Edison

Joint Resource Allocation Optimization in OFDM Relay Networks with SWIET
   Gaofei Huang
A New Scalable and Energy Efficient Algorithm for VMs Reassignment in Cloud Data Centers
   Makhlouf Hadji, Nabila Djenane, Rachida Aoudjit & Samia Bouzefrane
A Novel Authentication and Key Agreemnt Protocol for Internet of Things Based Resource constrained Body Area Sensors
  
  Muhammad A Iqbal, Magdy Bayoumi

Particle Swarm Optimization Scheduling for Energy Saving in Cluster Computing Heterogenous Environments
  
  Eloi Gabaldon Ponsa, Fernando Guirado, Josep Lluis Lerida, Jordi Planes

Energy efficiency in Mobile Cloud Computing Architectures
  
  Thinh Le Vinh, Reddy Pallavali, Fatiha Houacine & Samia Bouzefrane

**BigDataR&I Session 2: Big Data Research and Innovation 2**

Session Chair: Natalia Miloslavskaya, Moscow Engineering Physics Institute
Room: Tesla

Taxonomy for Unsecure Big Data Processing in Security Operations Centers
  
  Natalia Miloslavskaya, Alexander Tolstoy and Sergey Zapechnikov.

Forecasting The Natural Gas Price Trend – Evaluation of a Sentiment Analysis
  
  Tina Grundmann, Carsten Felden and Marco Pospiech.

Rule- and Cost-Based Optimization of OLAP Workloads on Distributed RDBMS with Column-Oriented Storage Function
  
  Takamitau Shioi and Kenji Hatano.

Infrastructure-Aware Functional Testing of MapReduce programs
  
  Jesús Morán, Bibiano Rivas, Claudio De La Riva, Javier Tuya, Ismael Caballero and Manuel Serrano.

An incremental approach for real-time Big Data visual analytics
  
  Ignacio García Fernández, Rubén Casado and Hamid Bouchachia

**ICI Session 1: Inter-Cloud and IoT**

Session Chair: Irfan Awan, University of Bradford
Room: Watt

Multilayer virtualized systems analysis with kernel tracing
  
  Cedric Biancheri, Naser Ezzati and Michel Dagenais

A Coordination-based Brokerage Architecture for Multi-Cloud Resource Markets
  
  Claus Pahl

Legal and Regulative Aspects of IoT Cloud Systems
  
  Edua Eszter Kalmar, Attila Kertesz, Szilvia Varadi, Radhika Garg, Burkhard Stiller

MobIoTSim: Towards a Mobile IoT Device Simulator
  
  Tamás Pflanzner, Attila Kertész, Bart Spinnewyn and Steven Latre
Using Block Cipher for Data Confidentiality in Cloud-based Systems
*Rana Rihan and Khaled Khan*

20:00-22:00 Dinner Party
(at Hotel Park Royal Palace - conference venue)
WEDNESDAY 24 AUGUST 2016

09:00-10:30 Parallel Sessions

FiCloud Session 8: Intelligent Systems for Cloud and Services Computing
Session Chair: Stephan Reiff-Marganiec, University of Leicester
Room: Edison
LOV4IoT: A second life for ontology-based domain knowledge to build Semantic Web of Things applications
   Amelie Gyrard, Christian Bonnet, Karima Boudaoud and Martin Serrano
Reusing and Unifying Background Knowledge for Internet of Things with LOV4IoT
   Amelie Gyrard, Ghislain Atemezing, Christian Bonnet, Karima Boudaoud and Martin Serrano
Learning Semantic Features from Web Services
   Mário Antunes, Diogo Gomes and Rui Aguiar
Cloud Job Access Control Scheme Based on Gaussian Process Regression and Reinforcement Learning
   Zhiping Peng and Delong Cui
Agent-Based Cloud Computing: A Survey
   Mohamed Galal Hafez and Mohamed Shaheen Elgamel

MobiWis Session 6: Mobile Web and Applications
Session Chair: Tor-Morten Grønli, Westerdals Oslo ACT
Room: Tesla
Shopping Furniture and Appliances with FAV Mobile Application
   Samia Loucif, Dena Ahmed, Reem Salem and Nasra Ali
A Measurement Tool to Track Drones Battery Consumption During Flights
   Luis Corral, Ilenia Fronza, Nabil El Ioini and Aristea Ibershimi
Speed Up Native Mobile Form Development
   Armin Engesser, Mike Groezinger and Ralf Schimkat
Location Based Services used in Smart Electronic Wallet Mobile Application
   Jan Kozlovsky, Jan Dvorak, Ondrej Krejcar
Smart Automatic Control of GSM Alarm
   Lukas Veselka, Jan Dvorak, Ondrej Krejcar

ICI Session 2: Mobile Cloud and Data
Session Chair: Fisnik Dalipi, Norwegian University of Science and Technology
Room: Watt
Power Optimization of Large Scale Mobile Cloud System using Cooperative Cloudlets
   Muneera Al-Quraan, Mahmoud Al-Ayyoub, Yaser Jararweh, Lo’Ai Tawalbeh and Elhadj Benkhelifa
Mobile Health (m-health) System in the context of IoT
Sultan Almotiri, Murtaza Khan and Mohammed Alghamdi

Inter-Domain Mobility Management using SDN For Residential/Enterprise
Real Time Services
Walaa Farouk and Mikhail Mikhail

Evaluating NoSQL document oriented data model
Hadi Hashem and Daniel Ranc

Knowledge management as a service (KMaaS)
Peter Balco and Martina Drahošová

10:30-11:00 Coffee Break

11:00-12:30 Parallel Sessions

FiCloud Session 9: IoT Services and Applications
Session Chair: Sylvain Kubler, University of Luxembourg
Room: Edison II

Choosing your IoT Programming Framework: Architectural Aspects
Leila Fatmasari Rahman, Tanir Ozcelebi and Johan J. Lukkien

Micro-billing framework for IoT: Research & Technological foundations
Jérémy Robert, Sylvain Kubler and Yves Le Traon

Thing as a Service Interoperability: Review and Framework Proposal
Darko Andročec and Neven Vrček

HINC – Harmonizing Diverse Resource Information Across IoT, Network Functions and Clouds
Duc Hung Le, Nanjangud Narendra and Hong-Linh Truong

Information Retrieval as a Service for the Web of Things: A Survey and a Proposal of IRaaS Architecture
Cristyan Manta Caro and Juan M. Fernández-Luna

MobiWis Session 7: Mobile Applications and Wearable Devices
Session Chair: Aneta Poniszewska-Maranda, Lodz University
Room: Tesla

Persuasive Cities for Sustainable Wellbeing: Quantified Communities
Agnis Stibe and Kent Larson

H-Plane: Intelligent Data Management for Mobile Healthcare Applications
Rahul Krishnan Pathinarupothi, Bithin Alangot, Maneesha Vinodini
Ramesh, Krishnashree Achuthan and P. Venkat Rangan

Mobile Health Devices for Aging Population Groups: A Review Study
Blanka Klimova

Sensors in your Clothes: Design and Development of a Prototype
Kristine Lorentzen, Tor-Morten Grønli, Gheorghita Ghinea, Muhammad Younas
Utilizing Multiple Interaction Styles to Collect Installed Base Information Using Wearable and Mobile Devices

Markus Aleksy and Nicolaie Fantana

ICI Session 3: Security and Privacy
Session Chair: Attila Kertesz, University of Szeged
Room: Edison III
Security and Privacy Considerations for IoT Application on Smart Grids: Survey and Research Challenges

Fisnik Dalipi and Sule Yildirim Yayilgan
Cyber-Attack Modeling Analysis Techniques: An Overview

Hamad Al-Mohannadi, Qublai Mirza, Anitta Patience Namanya, Irfan Awan, Andrea Cullen and Jules Disso
A Survey on Network Security Monitoring Systems

Ibrahim Ghafir, Mohammad Hammoudeh, Jakub Svoboda and Vaclav Prenosil
State-Level Views on Professional Competencies in the Field of IoT and Cloud Information Security

Natalia Miloslavskaya and Alexander Tolstoy
Provable Secure Pairing-free Certificate-less Authenticated Key Agreement Protocol

Amr Farouk and Mohamed Fouad

ICI Session 4: Cloud and Networking
Session Chair: Hari Kumar Nagabushanam, Ericsson, India
Room: Watt
Dual Backhaul Links in Mobile Relay in LTEAdvanced Systems For Public Transportation Vehicles.

Khaled Addali, Abderrahmane Benmimoune, Michel Kadoch, Fawaz Khasawneh and Amamer Saied
Distributed Interference Alignment in Partially Connected Networks Without Preliminary Topological Knowledge

Peter Farkaš, Matej Staroň and Frank Schindler
Virtual Machines’ Load-Balancing in Inter-Clouds

Mohamed Riduan Abid, Karima Kaddouri, Moulay Driss El Ouatghiri, Kevin Smith and Michael Gerndt
A Container-based Edge Cloud PaaS Architecture based on Raspberry Pi Clusters

Claus Pahl, Sven Helmer, Lorenzo Miori and Julian Sanin
An Autonomous Aquaponics System using 6LoWPAN based WSN

Hari Kumar Nagabushanam, Sanjana Hariraj and Vaishali Krishnan

12:30-13:30 Lunch
FiCloud Session 10: Cloud and IoT Systems
Session Chair: Stefan Bosse, University of Bremen
Room: Edison II
Effective Live Cloud Migration
   **Ibrahim Ejdayid A Mansour, Kendra Cooper and Hamid Bouchachia**
DevOps for IoT Applications using Cellular Networks and Cloud
   **Athanasiou Karapantelakis, Hongxin Liang, Keven Wang, Rafia Inam, Elena Fersman, Ignacio Mulas-Viela, Nicolas Seyvet, Vasileios Giannokostas and Konstantinos Vandikas**
Inter Ecosystem Interoperability on Cloud Survey to Solution
   **Abdul Razzaq, Muhammad Asif and Hafiz Usman Zia**
A Generic Digital Forensic Investigation Framework for Internet of Things
   **Víctor Kebande and Indrakshi Ray**
Optimising Fault Tolerance in Real-time Cloud Computing IaaS Environment
   **Bashir Mohammed, Mariam Kiran, Irfan-Ullah Awan and Kabiru M. Maiyama**

FiCloud Session 11: Data, Knowledge Management and Monitoring
Session Chair: Eric Rondeau, University of Lorraine
Room: Edison III
Improving Bitmap Execution Performance Using Column-Based Metadata
   **Miguel Velez, Jason Sawin, Alexia Ingerson and David Chiu**
Key Dimensions for Cloud mauData Governance
   **Majid Al-Ruith, Elhadj Benkhelifa and Khawar Hameed**
Semantic model for IoT-enabled electric vehicle services: Puzzling with ontologies
   **Min-Jung Yoo, Prodromos Kolyvakis, Dimitris Kiritsis, Dirk Werthmann and Robert Hellbach**
Using ICT Energy consumption for monitoring ICT usage in an enterprise
   **Dimitar Minovski, Eric Rondeau and Jean-Philippe Georges**
Environment Monitoring in Smart Cities using Virtual Sensors
   **Sunanda Bose and Nandini Mukherjee**

Session: MobiApps Workshop
Session Chair: Samia Loucif, ALHOSN University
Room: Tesla
Malware Development on Mobile Environments
   **Gianluca Papaleo, Enrico Cambiaso, Luca Patti, Maurizio Aiello**
Application for the Detection of Dangerous Driving and an Associated Gamification Framework
    Keshav Bahadoor, Patrick Hosein
ROBODEM mobile Application for Real time video streaming of Robotic System
    Tasneem Yousif, Aysha Alharam
Smart Mobile-based Emergency Management and Notification System
    Mohammed Ghazal, Samr Samir Ali, Marah Alhalabi, Nada Ali, Yasmina Al Khalil
Towards Secure Mobile Process Tracking using Wearable Computing in mGovernment Applications
    Yasmina Al Khalil, Fasila Haneefa, Assem Marwan Mhanna, Dana H. Awachi, Samr Samir Ali
A Mobile Cloud System for Different Useful Applications
    Lo’ai A. Tawalbeh, Waseem Bakheder

Session: PMECT and AWMA Symposia
Session Chair: Peter Bull, Birmingham City University
Room: Watt

On the Performance of Tabu Search Algorithm for the Vehicle Routing Problem with time windows
    Pinar Kirci
Authentication and Key Management in A LTE-based Control and Non-payload Communication Network
    Gicheol Wang, Byungsun Lee and Jaeyeong Ahn
Optimised QoS-aware DBA mechanisms in XG-PON for upstream traffic in LTE Backhaul
    Jerome A. Arokkiam, Cormac J. Sreenan and Kenneth N. Brown
Sizing Network Buffers: A HTTP Adaptive Streaming Perspective
    Darijo Raca, Ahmed Zahran and Cormac Sreenan