11:00 A distributed, load-aware, power and frequency bargaining protocol for LTE-based networks
Vangelis Angelakis (Linköping University, Sweden); Muhammad Sajid (Linköping University, Sweden); Imran Siddiqui (Linköping University, Sweden); Di Yuan (Linköping University, Sweden)
pp. 6525-6529

11:20 A smart multi-hop hierarchical routing protocol for efficient video communication over wireless multimedia sensor network
Denis Lima Rosário (Federal University of Para, Brazil); Rodrigo Medeiros Costa (Federal University of Para, Brazil); Helder Paraense (Federal University of Para, Brazil); Kássio Machado (Federal University of Para, Brazil); Eduardo Cerqueira (Federal University of Para & UFPA, Brazil); Torsten Ingo Braun (University of Bern, Switzerland)
pp. 6530-6534

11:40 A Peer-to-Peer Self-organizing Scheme for Multiparty Session
Dhafer Ben Khedher (Concordia University, Montreal & Ericsson Canada, Montreal, Canada, Canada)
pp. 6535-6539

13:30 - 15:30

S2: Monitoring and Applications
Chair: Ivan Stojmenovic (University of Ottawa, Canada)

13:30 Analyzing the Behavior of Top Spam Botnets
Rui Sousa (University of Aveiro & Instituto de Telecomunicações, Portugal); Nuno Rodrigues (Instituto de Telecomunicações & Instituto Politécnico de Bragança, Portugal); Paulo Salvador (Instituto de Telecomunicações, DETI, University of Aveiro, Portugal); António Nogueira (University of Aveiro/instituto de Telecomunicações, Portugal)
pp. 6540-6544

13:50 A Cellular Automaton Model for Connectivity Preserving Deployment of Mobile Wireless Sensors
Salimur Choudhury (Queen's University, Canada); Kai Salomaa (School of Computing Queen's University Canada, Canada); Salim G. Akl (Queen's University, Canada)
pp. 6545-6549

14:10 Adaptive Discrete Particle Swarm Optimization for Cognitive Radios
Ali Haider Mahdi (Ilmenau University of Technology, Germany); Jerome Mohanan (Ilmenau University of Technology, Germany); Mohamed Abd Rabou Ahmed Kalil (Ilmenau University of Technology, Germany); Andreas Mitschele-Thiel (Ilmenau University of Technology, Germany)
pp. 6550-6554
14:30 A Smartphone Design Approach to User Communication Interface for Administering Storage System Network
Weider D. Yu (San Jose State University, USA); Jason Hansen (San Jose State University, USA)
pp. 6555-6559

14:50 Interaction of HiveMind Application with Smart Conference System
Andrey Vasilev (Yaroslavl State University, Russia); Ilya Paramonov (Yaroslavl State University, Russia); Ekaterina Dashkova (University of Oulu, Finland); Yevgeni Koucheryavy (Tampere University of Technology, Finland); Sergey I. Balandin (FRUCT Oy, Finland)
pp. N/A

15:10 Pheromone-based In-Network Processing for Wireless Sensor Network Monitoring Systems
Guillermo G Riva (National Technological University & Digital Communication Lab (LCD) - National University of Cordoba, Argentina); Jorge M Finochietto (National University of Córdoba & CONICET, Argentina)
pp. 6560-6564

15:30 NETCONF agent for link state monitoring
Diogo Loureiro (University of Aveiro, DETI/IT, Portugal); Pedro A. Gonçalves (Universidade de Aveiro, Portugal); António Nogueira (University of Aveiro/Instituto de Telecomunicações, Portugal)
pp. 6565-6569

16:00 - 18:00

S3: Wireless channel and scheduling

Chair: Joel J. P. C. Rodrigues (Instituto de Telecomunicações, University of Beira Interior, Portugal)

16:00 Using Minimization of Maximal Regret for Interface Selection in a Heterogeneous Wireless Network
Talmai B Oliveira (University of Cincinnati, USA); Srisudha Mahadevan (University of Cincinnati, USA); Dharma P Agrawal (University of Cincinnati, USA)
pp. 6570-6574

16:20 A practical distance estimator through distributed RSSI/LQI processing - An experimental study
Madhanmohan Raju (University of Cincinnati, USA); Talmai B Oliveira (University of Cincinnati, USA); Dharma P Agrawal (University of Cincinnati, USA)
pp. 6575-6579

16:40 Fully Distributed State Estimation of Smart Grids
Yunxin (Jeff) Li (NICTA & University of Sydney, Australia)
pp. 6580-6585
17:00 Smart Scheduling and Feedback Allocation over Non-stationary Wireless Channels
Mehmet Karaca (Sabanci University, USA); Tansu Alpcan (The University of Melbourne, Australia); Ozgur Ercetin (Sabanci University, Turkey)
pp. 6586-6590

17:20 Improved Channel Assignment for WLANs by Exploiting Partially Overlapped Channels with Novel CIR-Based User Number Estimation
Penghui Mi (The University of Western Ontario, Canada); Xianbin Wang (The University of Western Ontario, Canada)
pp. 6591-6595

17:40 Size-Based and Channel-Aware Scheduling Algorithm Proposal for Mean Delay Optimization in Wireless Networks
Iainire Taboada (University of the Basque Country, Spain); Jose Oscar Fajardo (University of the Basque Country, Spain); Fidel Liberal (University of the Basque Country, Spain); Bego Blanco (University of the Basque Country, Spain)
pp. 6596-6600
ICC'12 WS - SDN: Software Defined Networks - Program

Friday, June 15

08:30 - 08:40
O: Opening

Message from the chairs
Room: F10
Chair: Max Ott (NICTA, Australia)

08:40 - 09:30
K1: KEYNOTE 1: Boon Thau Loo (University of Pennsylvania)

Title: A Declarative Perspective on Programmable Networking
Room: F10
Chair: Marcos Rogerio Salvador (CPqD, Brazil)

09:30 - 10:00
TS1: Technical Session 1

Room: F10
Chair: Marcos Rogerio Salvador (CPqD, Brazil)

09:30 Cost, performance & flexibility in OpenFlow: Pick three
Charalampos Rotsos (University of Cambridge, United Kingdom); Richard Mortier
(University of Nottingham & Horizon Digital Economy Research, United Kingdom);
Anil Madhavapeddy (University of Cambridge, United Kingdom); Balraj Singh
(Computer Laboratory, University of Cambridge, United Kingdom); Andrew W. Moore
(University of Cambridge, United Kingdom)
10:30 - 12:30

TS2: Technical Session 2

Room: F10
Chair: Marcos Rogerio Salvador (CPqD, Brazil)

10:30 Scalable Fault Management for OpenFlow
James Kempf (Ericsson Research, USA); Elisa Bellagamba (Ericsson, Sweden); Andras Kern (Ericsson, Hungary); David Jocha (Ericsson, Hungary); Attila Takacs (Ericsson, Hungary); Pontus Skoldstrom (Acreo AB & Acreo, Sweden)
pp. 6606-6610

10:55 A Programmable Networking Switch Node with In-network Processing Support
Namgon Kim (Gwangju Institute of Science and Technology, Korea); Jae-Yong Yoo (Gwangju Institute of Science and Technology, Korea); NamGon L Kim (Gwangju Institute of Science and Technology, Korea); JongWon Kim (GIST (Gwangju Institute of Science & Technology), Korea)
pp. 6611-6615

11:20 Driving Software Defined Networks with XSP
Ezra Kissel (University of Delaware, USA); Guilherme Fernandes (Indiana University, USA); Matthew Jaffee (Indiana University, USA); Martin Swany (Indiana University, USA); Miao Zhang (Indiana University, USA)
pp. 6616-6621

11:45 Network Virtualization and Resource Allocation in OpenFlow-based Wide Area Networks
Pontus Skoldstrom (Acreo AB & Acreo, Sweden); Kiran Yedavalli (Cisco Systems, USA)
pp. 6622-6626

12:10 Abstracting network state in Software Defined Networks (SDN) for rendezvous services
Vijay Gurbani (Bell Laboratories, Alcatel-Lucent, USA); Michael Scharf (Alcatel-Lucent Bell Labs, Germany); T. V. Lakshman (Bell Labs, Alcatel-Lucent, USA); Volker Hilt (Bell Labs/Alcatel-Lucent, USA); Enrico Marocco (Telecom Italia, Italy)
pp. 6627-6632

14:00 - 15:30

TS3: Technical Session 3

Room: F10
Chair: Marcos Rogerio Salvador (CPqD, Brazil)
14:00 Realizing Packet-Optical Integration with SDN and OpenFlow 1.1 Extensions
Meral Shirazipour (Ericsson, Canada); Wolfgang John (Ericsson Research, Sweden); James Kempf (Ericsson Research, USA); Howard Green (Ericsson Research, USA); Mallik Tatipamula (Ericsson Research, USA)
pp. 6633-6637

14:25 Verification of Switching Network Properties Using Satisfiability
Rick McGeer (HP Laboratories, USA)
pp. 6638-6644

14:50 Supporting Information-Centric Functionality in Software Defined Networks
Luca Veltri (University of Parma, Italy); Giacomo Morabito (University of Catania, Italy); Stefano Salsano (University of Rome "Tor Vergata", Italy); Nicola Blefari-Melazzi (University of Rome "Tor Vergata", Italy); Andrea Detti (University of Rome "Tor Vergata", Italy)
pp. 6645-6650

15:15 A Flexible In-Network IP Anonymization Service
Marc Mendonca (University of California, Santa Cruz, USA); Srini Seetharaman (Deutsche Telekom R&D Lab, USA); Katia Obraczka (University of California, Santa Cruz, USA)
pp. 6651-6656

16:00 - 16:40
K2: KEYNOTE 2: Thomas D. Nadeau (Juniper Networks)
Title: Software Driven or Defined Networks
Room: F10
Chair: Marcos Rogerio Salvador (CPqD, Brazil)

16:40 - 17:59
PD1: Panel discussion
Room: F10
Chair: Marcos Rogerio Salvador (CPqD, Brazil)
Friday, June 15

**8:30 - 9:00**  

**9:00 - 10:00**  
**S1: Security Forensics**

Chair: Noureddine A. Boudriga (University of Carthage, Tunisia)

- **09:00 A Game Theoretic Investigation for High Interaction Honeypots**  
  Osama Hayatle (Concordia University, Canada); Hadi Otrok (Khalifa University of Science, Technology & Research (KUSTAR), UAE); Amr Youssef (Concordia University, Canada)  
  pp. 6662-6667

- **09:20 Triage-based Automated Analysis of Evidence in Court Cases of Copyright Infringement**  
  Fabio Marturana (University of Rome "Tor Vergata", Italy); Rosamaria Bertè (University of Rome Tor Vergata, Italy); Simona Tacconi (Servizio Polizia Postale e delle Comunicazioni, Italy); Gianluigi M. (Università di Roma "Tor Vergata", Dipartimento di Informatica, Sistemi e Produzione, Italy)  
  pp. 6668-6672

- **09:40 Mark Association-based Investigation of Attack Scenarios in Communication Networks**  
  Yacine Djemaie (Sup'Com CN&S Research Lab., Tunisia); Slim Rekhis (University of Carthage & Communication Networks and Security Research Lab., Tunisia); Noureddine A. Boudriga (University of Carthage, Tunisia)  
  pp. 6673-6677
10:30-12:30

S2: Intrusion Detection

Chair: Korbinian Riedhammer (University of Erlangen-Nuremberg, Germany)

10:30 A Reverse Gaussian Deployment Strategy for Intrusion Detection in Wireless Sensor Networks

Hailong Li (University of Cincinnati, USA); Vaibhav Pandit (University of Cincinnati, USA); Narendranad Katneni (University of Cincinnati, USA); Dharma P Agrawal (University of Cincinnati, USA)

pp. 6678-6682

10:47 An Ontology-Based System to Identify Complex Network Attacks

Lisa Frye (Kutztown University, USA); Liang Cheng (Lehigh University, USA); Jeff Heflin (Lehigh University, USA)

pp. 6683-6688

11:04 A Physical Layer Metric for Measuring Base Station Anonymity in Wireless Sensor Networks

Jon R. Ward (The Johns Hopkins University, USA); Mohamed Younis (University of Maryland Baltimore County, USA)

pp. 6689-6693

11:21 Identification of Source Applications for Enhanced Traffic Analysis and Anomaly Detection

André Zuquete (University of Aveiro & IEETA, Portugal); Miguel Rocha (IEETA, University of Aveiro, Portugal)

pp. 6694-6698

11:38 Wormhole Detection Using Channel Characteristics

Shalabh Jain (University of Maryland, USA); Tuan Ta (University of Maryland, College Park, USA); John S. Baras (University of Maryland College Park, USA)

pp. 6699-6704

11:55 Base-station Location Anonymity and Security Technique (BLAST) for Wireless Sensor Networks

Venkata P. V. Gottumukkala (University of Cincinnati, USA); Vaibhav Pandit (University of Cincinnati, USA); Hailong Li (University of Cincinnati, USA); Dharma P Agrawal (University of Cincinnati, USA)

pp. 6705-6709

14:00-15:30

S3: Anonymity, Privacy, and Access Control

Chair: Slim Rekhis (University of Carthage & Communication Networks and Security Research Lab., Tunisia)
14:00 A Formal Taxonomy of Privacy in Voting Protocols
Jannik Dreier (University of Grenoble, CNRS, Verimag, France); Pascal Lafourcade (Verimag, France); Yassine Lakhnech (University Joseph Fourier, France)
pp. 6710-6715

14:18 Smart Grid Multilayer Consensus Password-Authenticated Key Exchange Protocol
Hasen Nicanfar (The University of British Columbia, Canada); Victor CM Leung (The University of British Columbia, Canada)
pp. 6716-6720

14:36 CatBAC: A Generic Framework for Designing and Validating Hybrid Access Control Models
Bernard Stepien (University of Ottawa, Canada); Hemanth Khambhammettu (Université du Québec en Outaouais, Canada); Kamel Adi (University of Quebec in Outaouais, Canada); Luigi Logrippo (Universite de Quebec a l'Outaouais, Canada)
pp. 6721-6726

14:54 X.509 Identity Certificates with Local Verification
Christian Bauer (German Aerospace Center (DLR), Germany)
pp. 6727-6732

15:12 SIP Protector: Defense Architecture Mitigating DDoS Flood Attacks Against SIP Servers
Jan Stanek (Czech Technical University in Prague & RDC for Mobile Applications, Czech Technical University, Czech Republic); Lukas Kencl (Czech Technical University in Prague, Czech Republic)
pp. 6733-6738

16:00 - 18:00
S4: Signal and Multimedia Security
Chair: Christian Bauer (German Aerospace Center (DLR), Germany)

16:00 Elevating Watermark Robustness by Data Diffusion in Contourlet Coefficients
Hoda Rezaee Kaviani (McMaster University, Canada); Shadrokh Samavi (McMaster University, Canada); Nader Karimi (Isfahan University of Technology, Iran); Shahram Shirani (McMaster University, Canada)
pp. 6739-6743

16:20 Silhouette Coefficient Based Approach on Cell-Phone Classification for Unknown Source Images
Shu Han Luan (Dalian University of Technology, P.R. China); Xiangwei Kong (Dalian University of Technology, P.R. China); Yangqin Guo (Dalian University of Technology, P.R. China); Bo Wang (Dalian University of Technology, P.R. China); Xingang You (Beijing Institute of Electronic Technology and Application, P.R. China)
pp. 6744-6747

16:40 A PKI-free Key Agreement Protocol for P2P VoIP Applications
Riccardo Pecori (University of Parma, Italy)
pp. 6748-6752
17:00 Covert and Side Channels in Buildings and the Prototype of a Building-aware Active Warden
   Steffen Wendzel (University of Hagen & Augsburg University of Applied Sciences, Germany)
   pp. 6753-6758

17:20 Forensic Content Detection Through Power Consumption
   Benjamin Justus (Muenster University of Applied Science, Germany); Ulrich Greveler (Muenster University of Applied Science, Germany); Dennis Loehr (Muenster University of Applied Science, Germany)
   pp. 6759-6763

17:40 A Software Kit for Automatic Voice Descrambling
   Korbinian Riedhammer (University of Erlangen-Nuremberg, Germany); Matthias Ring (University of Erlangen-Nuremberg, Germany); Elmar Nöth (Universität Erlangen Nürnberg, Germany); Dirk Kolb (Friedrich-Alexander-University, Germany)
   pp. 6764-6768
## ICC'12 WS - SmallNets: International Workshop on Small Cell Wireless Networks 2012 - Program

<table>
<thead>
<tr>
<th>Time</th>
<th>Thursday, June 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 - 9:15</td>
<td>Keynote</td>
</tr>
<tr>
<td>9:15 - 10:15</td>
<td>Handover and Resource Allocation</td>
</tr>
<tr>
<td>10:15 - 10:30</td>
<td>Interference Management</td>
</tr>
<tr>
<td>10:30 - 12:30</td>
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<td>12:30 - 14:00</td>
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### Friday, June 15

**08:30 - 09:15**

**Keynote**

Prof. Tamer Başar (University of Illinois at Urbana-Champaign, USA)  
Chair: Walid Saad (University of Miami, USA)

**09:15 - 10:15**

**Handover and Resource Allocation**

Chair: Walid Saad (University of Miami, USA)

- **09:15** *Joint Interference Management and Handover optimization in LTE Small Cells Network*
  
  Veronique Capdevielle (Alcatel Lucent Bell Labs, France); Afef Feki (Bell Labs - Alcatel Lucent - France, France); Elom Sorsy (Telecom Bretagne & Alcatel-Lucent Bell Labs, France)  
  pp. 6769-6773

- **09:35** *Theoretical Analysis of Handover Failure and Ping-Pong Rates for Heterogeneous Networks*
  
  David López-Pérez (Bell Labs Alcatel-Lucent, Ireland); Ismail Güvenç (Florida International University, USA); Xiaoli Chu (University of Sheffield, United Kingdom)  
  pp. 6774-6779

- **09:55** *Downlink SINR distribution in a Heterogeneous Cellular Wireless Network with Biased Cell Association*
  
  Sayandev Mukherjee (DOCOMO Innovations Inc., USA)
10:30 - 12:30

Interference Management

Chair: Ismail Güvenç (Florida International University, USA)

10:30 Scheduling Strategies for HetNets using elCIC
Andreas Weber (Alcatel-Lucent, Germany); Oliver Stanze (Alcatel-Lucent Bell Labs, Germany)
pp. 6780-6784

10:50 Sensitivity Study of Optimal elCIC Configurations in Different Heterogeneous Network Scenarios
Yuanye Wang (Powerwave Technologies & Aalborg University, USA); Beatriz Soret (Aalborg University, Denmark); Klaus Pedersen (Nokia Siemens Networks, Denmark)
pp. 6785-6790

11:10 CRS Interference Cancellation in Heterogeneous Networks for LTE-Advanced Downlink
Beatriz Soret (Aalborg University, Denmark); Yuanye Wang (Powerwave Technologies & Aalborg University, USA); Klaus Pedersen (Nokia Siemens Networks, Denmark)
pp. 6791-6795

11:30 Distributed Algorithm for Downlink Resource Allocation in Multicarrier Small Cell Networks
Furqan Ahmed (Aalto University, Finland); Alexis Alfredo Dowhuszko (Aalto University, School of Science and Technology & National University of Cordoba, Finland); Olav Tirkkonen (Aalto University, Finland)
pp. 6796-6800

11:50 Dual-Band Femtocell Traffic Balancing Over Licensed and Unlicensed Bands
Feilu Liu (Qualcomm, USA); Elza Erkip (Polytechnic Institute of NYU, USA); Mihaela Beluri (Interdigital, USA); Rui Yang (Interdigital, USA); Erdem Bala (InterDigital, USA)
pp. 6801-6805

14:00 - 14:45

Keynote

Keynote talk by Prof. Jeffrey G. Andrews, The University of Texas, Austin
Chair: Mehdi Bennis (Centre of Wireless Communications, University of Oulu, Finland)

14:45 - 15:45

Evaluation and Modeling

Chair: Mehdi Bennis (Centre of Wireless Communications, University of Oulu, Finland)
14:45 Empirical gains achievable with low altitude remote radio heads in wireless urban links
Luciano Ahumada (Universidad Diego Portales, Chile); Rodolfo Feick (Universidad Técnica Federico Santa María, Chile); Reinaldo Valenzuela (Lucent Technologies, USA); Manuel Gallardo (Universidad Técnica Federico Santa María, Chile); Milan S. Derpich (Universidad Tecnica Federico Santa María, Chile); Hector Carrasco (Universidad Técnica Federico Santa María, Chile)
pp. 6815-6819

15:05 Assessment of 3D network coverage performance from dense small-cell LTE
Mathieu Brau (SIRADEL, France); Yoann Corre (SIRADEL, France); Yves Lostanlen (SIRADEL & University of Toronto, Canada)
pp. 6820-6824

15:25 Transmission Strategies for Full Duplex Multiuser MIMO Systems
Thuy-Dan Nguyen (University of Oulu & Centre for Wireless Communications, Finland); Le-Nam Tran (University of Oulu & Centre for Wireless Communications, Finland); Pekka Pirinen (University of Oulu, Finland); Matti Latva-aho (UoOulu, Finland)
pp. 6825-6829

16:00 - 17:00
Transmission Strategies

Chair: Francesco Pantisano (University of Bologna & Centre for Wireless Communications, Finland)

16:00 On the Coexistence of Macrocell Spatial Multiplexing and Cognitive Femtocells
Ansuman Adhikary (USC, USA); Giuseppe Caire (University of Southern California, USA)
pp. 6830-6834

16:20 Distributed Scheduling and Power Control for Cognitive Spatial-Reuse TDMA Networks
Phond Phunchongharn (University of Manitoba and TRLabs, Canada); Ekram Hossain (University of Manitoba, Canada); Sergio Camorlinga (TRLabs, Winnipeg, Canada, and University of Manitoba, Canada)
pp. 6835-6839

16:40 Location-Based Transmit Power Control for Femtocell Access Points
Poramate Tarasak (Institute for Infocomm Research, Singapore); Siew Eng Nai (Institute for Infocomm Research, Singapore); Tony Q. S. Quek (Singapore University of Technology and Design (SUTD) & Institute for Infocomm Research, Singapore); Francois Chin (Institute for InfoComm Research, Singapore)
pp. 6840-6844
17:00 - 18:00

Panel Discussion: The way towards the future: Dense or Massive?

Chair: Giuseppe Caire (University of Southern California, USA)
### ICC'12 WS - Standards: Workshop on Telecommunications: From Research to Standards - Program

<table>
<thead>
<tr>
<th>Sunday, June 10</th>
<th>Monday, June 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30  Keynote I: An era of multi-networks,</td>
<td>Keynote III: Emerging Ecosystem for Leveraging Industrial and Academic</td>
</tr>
<tr>
<td>multi-services and many standards</td>
<td>Research in IEEE Standards and Standards-Related Activities</td>
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<td>9:15  Keynote II: Standards and innovation in</td>
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<td>emerging technologies: Why industry and</td>
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<td>academia need each other?</td>
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<td>10:00  COFFEE BREAK</td>
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<td>10:40  Session 1: Mobility Management and</td>
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<td>Networking</td>
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<td>12:20  LUNCH BREAK</td>
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<td>13:50  LUNCH BREAK</td>
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<tr>
<td>14:00  Session 2: Wireless Networking</td>
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<td>15:30  COFFEE BREAK</td>
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<tr>
<td>16:00  Session 3: From Research to Standards</td>
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<tr>
<td></td>
<td>Session 6: Services over LTE/EPC and Evolution</td>
</tr>
</tbody>
</table>
Sunday, June 10

08:30 - 09:15

Keynote I: An era of multi-networks, multi-services and many standards

Dr. Shigeyuki Akiba, KDDI R&D Laboratories Inc.
Chair: Adnan Abu-Dayya (QMIC, Qatar)

09:15 - 10:00

Keynote II: Standards and innovation in emerging technologies: Why industry and academia need each other?

Dr. Stephen Bush, GE Global Research and Dr. Andrew Eckford, York University
Chair: Adnan Abu-Dayya (QMIC, Qatar)

10:00 - 10:30

COFFEE BREAK

10:30 - 12:30

Session 1: Mobility Management and Networking

Chair: Konstantinos Samdanis (NEC Europe Ltd., Germany)

10:30 Furthering Media Independence Mechanisms for Future Internet Enablement
Daniel Corujo (Instituto de Telecomunicacoes Aveiro & Universidade de Aveiro, Portugal); Marcelo Lebre (Instituto de Telecomunicacoes, Portugal); Diogo Gomes (Universidade de Aveiro & Instituto de Telecomunicacoes, Portugal); Rui L Aguiar (University of Aveiro & Instituto de Telecomunicacoes, Portugal)
pp. 6845-6849

10:50 Distributed Mobility Management with Mobile IP
H Anthony Chan (Huawei Technologies, USA)
pp. 6850-6854

11:10 Towards Flat and Distributed Mobility Management: a 3GPP Evolved Network Design
Carlos J. Bernardos (Universidad Carlos III de Madrid, Spain); Juan Carlos Zúñiga (InterDigital Communications, LLC, Canada); Alex Reznik (InterDigital, USA)
pp. 6855-6861
11:30 Speeding up IPv6 Transition: Discovering NAT64 and Learning Prefix for IPv6 Address Synthesis
Aaron Yi Ding (University of Helsinki, Finland); Teemu Savolainen (Nokia, Finland); Jouni Korhonen (Nokia Siemens Networks, Finland); Markku Kojo (University of Helsinki, Finland)
pp. 6862-6868

11:50 System Design of Reverse-powered G.fast
Michael Timmers (Alcatel-Lucent Bell Labs, Belgium); Koen Hooghe (Bell Labs, Alcatel-Lucent, Belgium); Mamoun Guenach (Bell Laboratories, Alcatel-Lucent, Antwerp, Belgium); Chuck Story (Alcatel-Lucent, Belgium); Jochen Maes (Alcatel-Lucent Bell Labs, Belgium)
pp. 6869-6873

12:10 Roles of Network Federations for Bridging Multi-Generation Standard Architectures
Michiaki Hayashi (KDDI R&D Laboratories Inc., Japan); Shuichi Okamoto (KDDI R&D Laboratories Inc., Japan); Nobutaka Matsumoto (KDDI R&D Laboratories Inc., Japan)
pp. 6874-6878

12:30 - 14:00
LUNCH BREAK
14:00 - 15:30
Session 2: Wireless Networking
Chair: Syed Husain (DoCoMo Labs, Germany)

14:00 Evaluation of the IEEE 802.11aa Group Addressed Service for Robust Audio-Video Streaming
M. Angeles Santos (Universidad de Castilla-La Mancha, Spain); Jose Villalon (UCLM, Spain); Luis Orozco Barbosa (University of Castilla La Mancha, Spain)
pp. 6879-6884

14:22 IEEE 802.11ah: Advantages in Standards and Further Challenges for Sub 1 GHz Wi-Fi
Stefan Aust (NEC Communication Systems, Ltd., Japan); Venkatesha Prasad (Delft University of Technology, The Netherlands); Ignas G.M.M. Niemegeers (Delft University of Technology, The Netherlands)
pp. 6885-6889

14:45 Distributed Adaptive Backoff Reservation (DABR) for IEEE 802.11 Wireless Networks
Sina Asadallahi (University of Oklahoma, USA); Hazem Refai (Oklahoma University, USA)
pp. 6890-6894
15:07 The X.509 trust model needs a technical and legal expert
Ahmad Samer Wazan (IRIT, France); Romain Laborde (Université Paul Sabatier, France); François Barrière (Université Paul Sabatier, France); Abdelmalek Benzekri (IRIT – University Paul Sabatier Toulouse, France)
pp. 6895-6900

15:30 - 16:00
COFFEE BREAK

16:00 - 18:00
Session 3: From Research to Standards
Chair: Alex Reznik (InterDigital, USA)

16:00 Research and Reality: The evolution of Open Network API standards
Sune Jakobsson (ComoYo, Norway); Catherine E A Mulligan (University of Nottingham, United Kingdom); Musa Unmehopa (Alcatel-Lucent, The Netherlands)
pp. 6901-6905

16:20 Widening the Scope of a Standard: Real Time Flows Tunneling, Compressing and Multiplexing
Jose Saldana (University of Zaragoza, Spain); Dan Wing (Cisco, USA); Julián Fernández-Navajas (University of Zaragoza, Spain); José Ruiz-Mas (University of Zaragoza, Spain); Muthu Arul Mozhi Perumal (Cisco Systems, India); Gonzalo Camarillo (Ericsson, Finland)
pp. 6906-6910

16:40 Energy Efficient Mobile Backhaul: From Research to Standardization
Konstantinos Samdanis (NEC Europe Ltd., Germany); Manuel Paul (Deutsche Telekom AG, Germany)
pp. 6911-6915

17:00 IEEE DySPAN-SC Activities on Standardization of White Space Radio Systems
Stanislav Anatolievich Filin (NICT, Japan); Hiroshi Harada (National Institute of Information & Communications Technology (NICT), Japan)
pp. 6916-6920

17:20 Identifying standardization opportunities of an operator-driven, framework for unifying autonomic network and service management
Kostas Tsagkaris (University of Piraeus, Greece); Aristi Galani (University of Piraeus, Greece); Panagiotis Demestichas (University of Piraeus, Greece); Gerard Nguengang (Thales Communications SA, France); Mathieu Bouet (Thales Communications SA, France); Imen Grida Ben Yahia (Orange Labs, France); Christian Destré (Orange FT, France); Samir Ghahri-Doudane (Alcatel-Lucent Bell Labs France, France); Laurent Ciavaglia (Alcatel-Lucent, France)
pp. 6921-6925
17:40 Coordinated Computation of Multi-layer Paths via Inter-layer PCE Communication: Standards, Interoperability and Deployment
Mohit Chamania (Technische Universität Carolo-Wilhelmina zu Braunschweig, Germany); Oscar González de Dios (Telefónica I+D, Spain); Víctor López (Telefónica I+D, Spain); Marta Cuaresma (Telefónica I+D, Spain); Marek Drogon (TU Braunschweig, Germany); Admela Jukan (Technische Universität Carolo-Wilhelmina zu Braunschweig, Germany); Xavier Masip-Bruin (Universitat Politècnica de Catalunya & Advanced Network Architectures Lab (CRAAX), Spain); Marcelo Yannuzzi (Technical University of Catalonia (UPC), Spain)
pp. 6926-6931

Monday, June 11

08:30 - 09:15
Keynote III: Emerging Ecosystem for Leveraging Industrial and Academic Research In IEEE Standards and Standards-Related Activities

Dr. Alexander D. Gelman, IEEE-SA Standards
Chair: Hazem Refai (Oklahoma University, USA)

09:15 - 10:10
Session 4: Network Monitoring
Chair: Alia Goldner (Allot Communications, Israel)

09:15 Cost-controlled Monitoring Information Collection in Heterogeneous Mobile Network Infrastructures
Marius Corici (Fraunhofer FOKUS, Germany); Peter Hasse (Fraunhofer FOKUS, Germany); Cornelia Kappler (Huawei Technologies Düsseldorf GmbH, Germany); Kostas Pentikousis (Huawei Technologies & European Research Center, Germany); Rudolf Roth (Fraunhofer FOKUS, Germany); Mirko Schramm (Huawei Technologies Düsseldorf GmbH, Germany)
pp. 6932-6936

09:33 Design and Evaluation of Schemes for More Accurate ECN Feedback
Mirja Kuehlewind (University of Stuttgart, Germany); Richard Scheffenegger (NetApp, Inc., Austria)
pp. 6937-6941

09:51 Enhanced Voice over LTE and its roaming aspects
Syed S Husain (Telecom Consultant-Industry Standards & NTT DOCOMO, USA); Takashi Koshimizu (NTT DOCOMO, Inc., Japan); LaeYoung Kim (LG Electronics, Korea); Andreas Kunz (NEC Europe Ltd., Germany)
pp. 6942-6946
10:10 - 10:40
COFFEE BREAK

10:40 - 12:20
Panel Discussion

Future Telecommunications Systems & Standards: How Can Academia & Industry Collaboratively Contribute to their Shaping?
Chair: Asok Chatterjee (Ericsson, USA)

12:20 - 13:50
LUNCH BREAK

13:50 - 15:30
Session 5: Advances in Radio

Chairs: Vojislav B. Mišić (Ryerson University, Canada), Hazem Refai (Oklahoma University, USA)

13:50 Adaptive Channel Direction Quantization - Enabling Multi User MIMO Gains in Practice
Stefan Schwarz (Vienna University of Technology, Austria); Markus Rupp (Vienna University of Technology, Austria)
pp. 6947-6952

14:10 S-MIM: a Novel Radio Interface for Efficient Messaging Services over Satellite
Sandro Scalise (German Aerospace Center (DLR), Germany); Cristina Parraga Nlebla (German Aerospace Center (DLR), Germany); Antonio Arcidiacono (Eutelsat, France); Daniele V. Finocchiaro (Eutelsat S.A., France); Riccardo De Gaudenzi (European Space Agency (ESA), The Netherlands); Oscar Del Rio (ESTEC TOS-ETC, European Space Agency, The Netherlands); Gerald Schlüter (SES Astra, Luxemburg); Jens Krause (SES ASTRA, Luxemburg)
pp. 6953-6958

14:30 MU-MIMO in LTE: Performance and the challenges for future enhancement
Sean A. Ramprashad (DoCoMo Communications Labs, USA); Anass Benjebbour (NTT DoCoMo, Inc., Japan)
pp. 6959-6965

14:50 Electromagnetic compatibility: new trends for new standards
Najett Neji (Ecole Supérieure d'Electricité (SUPELEC), France); Raul de Lacerda (Ecole Supérieure d'Electricité (SUPELEC), France); Felipe Nyland (UFSC, Brazil); Lionel Pichon (SUPELEC, France)
pp. 6966-6970
15:10 Enhanced Mobile Digital Video Broadcasting with Distributed Space-Time Coding
Ming Liu (Institute of Electronics and Telecommunications of Rennes (IETR), France); Matthieu Crussière (IETR - Electronics and Telecommunications Research Institute of Rennes (IETR) & INSA - National Institute of Applied Sciences, France); Maryline Héard (INSA Rennes & IETR Institute of Electronics and Telecommunications of Rennes, France); Jean-François Héard (IETR, France); Youssef Nasser (American University of Beirut, Lebanon)
pp. 6971-6976

15:30 - 16:00
COFFEE BREAK

16:00 - 18:00
Session 6: Services over LTE/EPC and Evolution

Chairs: Anass Benjebbour (NTT DoCoMo, Inc., Japan), Sandro Scalise (German Aerospace Center (DLR), Germany)

16:00 Extending LTE to Support Machine-Type Communications
Vojislav B. Mišić (Ryerson University, Canada); Jelena Mišić (Ryerson University, Canada); Dragan Nerandzic (Ericsson Canada Inc., Canada)
pp. 6977-6981

16:20 Enabling Local Breakout from eNB in LTE Networks
Yinghua Ye (Nokia Siemens Networks, USA); Naheed Vora (NSN, USA); Jussi-Pekka Sairanen Sairanen (NSN, USA); Meghana Sahasrabudhe (NSN, USA)
pp. 6982-6986

16:40 Advanced Quality-of-Service Signaling for the Session Initiation Protocol (SIP)
Martin Röhrich (Karlsruhe Institute of Technology (KIT), Germany); Roland Bless (Karlsruhe Institute of Technology (KIT), Germany)
pp. 6987-6992

17:00 3GPP Traffic Detection Functionality
Alla Goldner (Allot Communications, Israel)
pp. 6993-6998

17:20 LTE-Advanced Heterogeneous Networks: Release 10 and Beyond
Teck Hu (Alcatel-Lucent, USA); Jiyong Pang (Alcatel-Lucent Shanghai Bell, P.R. China); Hsuan-Jung Su (National Taiwan University, Taiwan)
pp. 6999-7003

17:40 Advanced Downlink MU-MIMO Receiver for 3GPP LTE-A
Jung Hyun Bae (Samsung US R&D Center, USA); Sungsoo Kim (Samsung Electronics Co., Ltd, Korea); Jungwon Lee (Samsung US R&D Center, USA); Inyup Kang (Samsung Electronics, USA)
pp. 7004-7008
ICC'12 WS - Storage: Emerging Data Storage Technologies - Program

Monday, June 11

14:00 - 14:50

I1: Invited Talk 1

Writing More Than Once on a Write-Once-Memory
Room: M3
Chair: Warren Gross (McGill University, Canada)

14:50 - 15:30

S1: Session 1

Room: M3
Chair: Lara Dolecek (UCLA, USA)

14:50 Repair Topology Design for Distributed Storage Systems
Quan Yu (City University of Hong Kong, Hong Kong); Chi Wan Sung (City University of Hong Kong, Hong Kong); Terence H. Chan (University of South Australia, Australia)
pp. 7009-7013

15:10 Reverse Concatenated Watermark Codes
Rathnakumar Radhakrishnan (Marvell Semiconductors, USA); Kui Cai (Data Storage Institute, Singapore)
pp. 7014-7018

16:00 - 16:50

I2: Invited Talk 2

Algebraic LDPC Codes: Error Floor, Trapping Set Structure and the Rate of Decoding Convergence
Room: M3
Chair: Kui Cai (Data Storage Institute, Singapore)
16:50 - 18:00

S2: Session 2

Room: M3
Chair: Warren Gross (McGill University, Canada)

16:50 Probabilistic Analysis of Gallager B Faulty Decoder
Sadegh Tabatabaei Yazdi (UCLA, USA); Hyungmin Cho (Stanford University, USA);
Yifan Sun (University of California, Los Angeles, USA); Subhasish Mitra (Stanford
University, USA); Lara Dolecek (UCLA, USA)  
pp. 7019-7023

17:10 Reducing Data Transfer Latency of NAND Flash Memory with Soft-Decision
Sensing
Guiqiang Dong (Rensselaer Polytechnic Institute, USA); Yuelin Zou (Sunbelt
Solutions, USA); Tong Zhang (Rensselaer Polytechnic Institute, USA)  
pp. 7024-7028

17:30 Performance of Rate 0.96 (68254, 65536) EG-LDPC Code for NAND Flash
Memory Error Correction
Jonghong Kim (Seoul National University, Korea); Dong-hwan Lee (Seoul National
University, Korea); Wonyong Sung (Seoul National University, Korea)  
pp. 7029-7033
ICC'12 WS - U-NET: Third IEEE Workshop on User-Centric Networking - Program

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:15 - 10:00</td>
<td>U-NET Keynote Presentation</td>
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<td>Prof. Jon Crowcroft, University of Cambridge, UK</td>
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<td>Chair: Jiangzhou Wang (University of Kent, United Kingdom)</td>
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<td>10:30 - 12:30</td>
<td>U-NET Paper Session: User-centric Techniques in Communications</td>
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<td>Chair: Jiangzhou Wang (University of Kent, United Kingdom)</td>
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<td>10:30</td>
<td>Let Me Grab Your App: Preliminary Proof-of-Concept Design of Opportunistic Content Augmentation</td>
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<td>Giuseppe Bianchi (University of Rome &quot;Tor Vergata&quot;, Italy); Pierpaolo Loreti (University of Rome &quot;Tor Vergata&quot;, Italy); Arijana Trkulja (University of Rome &quot;Tor Vergata&quot;, Italy)</td>
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<td>pp. 7034-7039</td>
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<td>11:00</td>
<td>On the Impact of Correlated Shadowing on the Performance of User-in-the-Loop for Mobility</td>
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<td>Tamer Beitelmal (Carleton University, Canada); Rainer Schoenen (RWTH Aachen University, Faculty 6, Germany); Halim Yanikomeroglu (Carleton University, Canada)</td>
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<td>pp. 7040-7044</td>
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<td>11:30</td>
<td>Client-Based QoS Data Selection and Modeling Using Generalized Extreme Value Theorem and Linear Opinion Pool</td>
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<td>Ammar Kamel (Western Michigan University, USA); Ala Al-Fuqaha (Western Michigan University, USA); Driss Benhaddou (University of Houston, USA)</td>
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<td>pp. 7045-7049</td>
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12:00 Relay-Node Based Proactive Load Balancing Method in MPLS Network with Service Differentiation
Yukitaka Yoshida (University of Tsukuba, Japan); Masatoshi Kawarasaki (University of Tsukuba, Japan)
pp. 7050-7054

14:00 - 14:30
U-NET Keynote Presentation

Dr. Rute Sofia, Universidade Lusófona, Portugal
Chair: Jiangzhou Wang (University of Kent, United Kingdom)

14:30 - 17:00
U-NET Panel Discussion

Chair: Jiangzhou Wang (University of Kent, United Kingdom)
ICC'12 WS - ViOpt: Realizing Advanced Video Optimized Wireless Networks - Program

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
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<tbody>
<tr>
<td>08:30 - 10:00</td>
<td>Video Quality of Experience</td>
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<tr>
<td>10:00 - 10:30</td>
<td>Cross-layer Video Optimizations</td>
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<tr>
<td>10:30 - 12:40</td>
<td>Wireless Video Network Optimizations</td>
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</tbody>
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**Friday, June 15**

**08:30 - 10:00**

**Video Quality of Experience**

Chair: Robert Heath (The University of Texas at Austin, USA)

*08:30 Mobile Video Quality Assessment Database*
Anush Moorthy (The University of Texas at Austin, USA); Lark Kwon Choi (The University of Texas at Austin, USA); Alan C Bovik (University of Texas at Austin, USA); Gustavo de Veciana (The University of Texas at Austin, USA)
pp. WA

*09:15 Quality of Experience-based Routing in Multi-Service Wireless Mesh Networks*
Ricardo Matos (Instituto de Telecomunicações, Universidade de Aveiro, Portugal); Nuno Coutinho (Instituto de Telecomunicações, Universidade de Aveiro & Cefinet, Portugal); Carlos Marques (Instituto de Telecomunicações, Universidade de Aveiro, Portugal); Susana Sargento (Instituto de Telecomunicações, Universidade de Aveiro, Portugal); Jacob Chakareski (EPFL, Switzerland); Andreas J. Kassler (Karlstad University, Sweden)
pp. 7060-7065

**10:30 - 12:40**

**Cross-layer Video Optimizations**

Chair: Shivendra Panwar (Polytechnic Institute of New York University, USA)

*10:30 Two-way Wireless Video Communication using Randomized Cooperation, Network Coding and Packet Level FEC*
Xiaozhong Xu (Polytechnic Institute of New York University, USA); Ozgu Alay (Polytechnic University of NYU, USA); Elza Erkip (Polytechnic Institute of NYU, USA); Yao Wang (Polytechnic Institute of NYU, USA); Shivendra Panwar (Polytechnic Institute of New York University, USA)
pp. 7066-7070
11:35 **Video Capacity and QoE Enhancements over LTE**  
Sarabjot Singh (University of Texas at Austin, USA); Ozgur Oyman (Intel Corporation, USA); Apostolos Papathanassiou (Intel Corporation & Intel Architecture Group, USA); Debdeep Chatterjee (Intel Corporation, USA); Jeffrey Andrews (The University of Texas at Austin, USA)  
pp. 7071-7076

14:00 - 17:30

**Wireless Video Network Optimizations**

Chair: Jeffrey Foerster (Intel Corporation, USA)

**14:00 Base-Station Assisted Device-to-Device Communications for High-Throughput Wireless Video Networks**  
Negin Golrezaei (University of Southern California, USA); Andreas Molisch (University of Southern California, USA); Alex Dimakis (University of Southern California, USA)  
pp. 7077-7081

**15:10 Hierarchical Video Caching in Wireless Cloud: Approaches and Algorithms**  
Hasti Ahlehagh (University of California San Diego, USA); Sujit Dey (University of California, San Diego, USA)  
pp. 7082-7087

**16:20 QoE-Based Multi-Stream Scalable Video Adaptation over Wireless Networks with Proxy**  
Hao Hu (Cisco Systems, USA); Xiaojing Zhu (Cisco Systems, USA); Yao Wang (Polytechnic Institute of NYU, USA); Rong Pan (Cisco Systems Inc., USA); Jiang Zhu (Carnegie Mellon University, USA); Flavio Bonomi (Cisco Systems, USA)  
pp. 7088-7092
Friday, June 15

08:45 - 09:30

K1: Keynote 1

Internet of Things and Cyber Physical Systems with Sensors and Robots: Actuation Challenges

Room: F2

Chair: Ramiro Liscano (University of Ontario Institute of Technology, Canada)

09:30 - 10:00

SM1: Morning Pre-Break

Room: F2

Chair: Ramiro Liscano (University of Ontario Institute of Technology, Canada)

09:30 On Autonomous Indoor Flights: High-Quality Real-Time Localization using Low-Cost Sensors

Juergen Eckert (University of Erlangen, Germany); Reinhard German (Universitaet Erlangen-Nuernberg, Germany); Falko Dressler (University of Innsbruck, Austria)

pp. 7093-7098

10:30 - 12:30

SM2: Morning Post-Break

Room: F2

Chair: Nauman Aslam (Northumbria University, United Kingdom)
10:30 A New Distributed Scheduling Scheme for Timely Multi-hop Transmission of Delay-sensitive Information in Wireless Sensor Networks
Jae-Ryong Cha (Ajou University & WINNER lab., Korea); Jae-Hyun Kim (Ajou University, South Korea, Korea)
pp. 7099-7103

11:00 Adaptive Forward Error Correction for Best Effort Wireless Sensor Networks
Kan Yu (Mälardalen University, Sweden); Filip Barac (Mid Sweden University, Sweden); Mikael Gidlund (ABB, Sweden); Johan Åkerberg (ABB AB, Sweden)
pp. 7104-7109

11:30 A Game-Theoretic Approach to Connectivity Restoration in Wireless Sensor and Actor Networks
İzzet F. Senturk (Southern Illinois University Carbondale, USA); Sabri Yılmaz (Southern Illinois University Carbondale, USA); Kemal Akkaya (Southern Illinois University Carbondale, USA)
pp. 7110-7114

12:00 Data Collection Using Rendezvous Points and Mobile Actor in Wireless Sensor Networks
Abdullah Alomari (Dalhousie University, Canada); Nauman Aslam (School of Computing, United Kingdom); Frank D Comeau (St. Francis Xavier University, Canada)
pp. 7115-7119

14:00 - 15:00
SA1: Afternoon Pre-Break

Room: F2
Chair: Ramiro Liscano (University of Ontario Institute of Technology, Canada)

14:00 Distributed Data Gathering Scheduling Protocol for Wireless Sensor Actor and Actuator Networks
Wei Shen (Mid Sweden University, Sweden); Tingting Zhang (Mid Sweden University, Sweden); Mikael Gidlund (ABB, Sweden)
pp. 7120-7125

14:30 A Fault Detection Method for Wireless Sensor Networks Based on Improved LTS Regression Algorithm
Teng Wang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 7126-7130

16:00 - 17:00
P1: Panel Session
Challenges in Wireless Sensor Actuator and Actor Networks
Room: F2
Chair: Nauman Aslam (Northumbria University, United Kingdom)
Monday, June 11

08:50 - 09:00

S1: Introductions and Agenda

Prof. David Matolak (Ohio U.), Prof. David Michelson (U. British Columbia)
Chair: David W Matolak (University of South Carolina, USA)

09:00 - 09:30

S2: Invited Presentation #1: Biologically Inspired Solutions to Fundamental Transportation Problems

Prof. Ozan Tonguz, Carnegie Mellon University
Chair: David W Matolak (University of South Carolina, USA)
09:30 - 10:00

S3: Invited Presentation #2: Vehicular Communications & Networking: Things We Know and Don't Know

Dr. Onur Altintas, Toyota Information Technologies
Chair: David W Matolak (University of South Carolina, USA)

10:00 - 10:30

BREAK: BREAK

10:30 - 11:00

S4: Invited Presentation #3: Propagation Effects in V2V Communications

Prof. Andreas Molisch, University of Southern California
Chair: David W Matolak (University of South Carolina, USA)

11:00 - 11:30

S5: Invited Presentation #4: Improving Collaboration Across Vehicular Networking Disciplines

Prof. David Michelson, University of British Columbia
Chair: David W Matolak (University of South Carolina, USA)

11:30 - 12:30

S6: Physical Layer

Chair: David W Matolak (University of South Carolina, USA)

11:30 Vehicle-to-Vehicle IEEE 802.11p Performance Measurements at Urban Intersections

Henrik Schumacher (Leibniz Universität Hannover, Germany); Hugues Tchouankem (Leibniz University of Hannover & Institute of Communications Technology (IKT), Germany); Jörg Nuckelt (Technische Universität Braunschweig, Germany); Thomas Kürner (Technische Universität Braunschweig, Germany); Tetiana Zinchenko (Volkswagen AG, Germany); André Leschke (Volkswagen AG, Germany); Lars C Wolf (Technische Universität Braunschweig, Germany)

pp. 7131-7135
11:50 **Analysis and Suppression of Effects of CFO and Phase noise in WFMT Modulation for Vehicular Communications**
Junyeong Bok (Chungbuk National University, Korea); Seon Ae Kim (Chungbuk National University, Korea); Heung-Gyoon Ryu (Chungbuk National University, Korea)
pp. 7136-7140

12:10 **Multi-rate Vehicular Communications with Systematic Raptor Codes in Urban Scenarios**
Nor Fadzilah Abdullah (University of Bristol & Centre for Communications Research, United Kingdom); Angela Doufexi (University of Bristol, United Kingdom); Robert J Piechocki (University of Bristol, United Kingdom)
pp. 7141-7145

12:30 - 14:00
LINCH: LUNCH

14:00 - 15:20
S7: Networking
Chair: David W Matolak (University of South Carolina, USA)

14:00 **A Study of Beaconing Mechanism for Vehicle-to-Infrastructure Communications**
Amanda Daniel (Old Dominion University, USA); Dimitrie C. Popescu (Old Dominion University, USA); Stephan Olariu (Old Dominion University, USA)
pp. 7146-7150

14:20 **Channel Sensitive Transmission Scheme for V2I-based Floating Car Data Collection via LTE**
Christoph Ide (TU Dortmund University, Germany); Bjoern Dusza (Technical University of Dortmund, Germany); Markus Putzke (TU Dortmund University, Germany); Christian Wietfeld (TU Dortmund University & Communication Networks Institute, Germany)
pp. 7151-7156

14:40 **Robust Clustering for Connected Vehicles using Local Network Criticality**
Weiwei Li (University of Toronto, Canada); Ali Tizghadam (University of Toronto, Canada); Alberto Leon-Garcia (University of Toronto, Canada)
pp. 7157-7161

15:00 **Performance Measurements of Multi-hop Communications in Vehicular Ad Hoc Networks**
Veronika Shivaldova (Vienna University of Technology, Austria); Thomas Paulin (FTW, Austria); Alexander Paier (Kapsch TrafficCom, Austria); Christoph F Mecklenbräuker (Vienna University of Technology, Austria)
pp. 7162-7166
15:20 - 16:00
BREAK: BREAK

16:00 - 17:20

S8: Simulation, Security, Safety

Chair: David W Matolak (University of South Carolina, USA)

16:00 Overhauling ns-2 PHY/MAC Simulations for IEEE 802.11p/WAVE Vehicular Networks
Claudia Campolo (University "Mediterranea" of Reggio Calabria, Italy); Hector Agustin Cozzetti (Istituto Superiore Mario Boella, Italy); Antonella Molinaro (University "Mediterranea" of Reggio Calabria, Italy); Riccardo M. Scopigno (Istituto Superiore Mario Boella, Italy)
pp. 7167-7171

16:20 Multivariate Symmetric Polynomial Based Group Key Management for Vehicular Ad hoc Networks
Dushan Aththidiyavidanalage Don (University of Cincinnati, USA); Vaibhav Pandit (University of Cincinnati, USA); Dharma P Agrawal (University of Cincinnati, USA)
pp. 7172-7176

16:40 Increasing Safety and Efficiency of Railway
Cristina Rico-García (German Aerospace Center (DLR), Germany); Ozan Tonguz (Carnegie Mellon University, USA)
pp. 7177-7181

17:00 Opportunistic System for Collaborative Traffic Monitoring Using Existing IEEE 802.11 Networks
José Geraldo Ribeiro Júnior (Federal University of Rio de Janeiro, Brazil); Miguel Elias Mitre Campista (Federal University of Rio de Janeiro & GTA, Brazil); Luís Henrique M. K. Costa (Federal University of Rio de Janeiro, Brazil)
pp. 7182-7186

17:20 - 18:00

S9: Panel & Open Discussion

Panel and Discussion
Chair: David W Matolak (University of South Carolina, USA)

M. Nuruljaman, S. Sebbeh, C. Assi, and M. Maier
Optimal Capacity Planning and RPL Placement in Carrier Ethernet Mesh Network Design
pp. 7187-7192