

# **2013 10th Annual Conference on Wireless On-demand Network Systems and Services**

**(WONS 2013)**

**Banff, Alberta, Canada  
18 – 20 March 2013**



**IEEE Catalog Number: CFP13361-POD  
ISBN: 978-1-4799-0747-2**

## Program

### FPS1: Full Paper Session 1: Vehicular Networking #1

8:15am-9:45am

***OverDrive: An Overlay-based Geocast Service for Smart Traffic Applications***

Bernhard Heep (Karlsruhe Institute of Technology (KIT), Germany); Martin Florian (Karlsruhe Institute of Technology, Germany); Johann Volz (Karlsruhe Institute of Technology, Germany); Ingmar Baumgart (Karlsruhe Institute of Technology (KIT), Germany)  
pp. 1-8

***CoPRA: Conditional Pseudonym Resolution Algorithm in VANETs***

Norbert Bißmeyer (Fraunhofer Institute for Secure Information Technology, Germany); Jonathan Petit (University of Twente, The Netherlands); Kpatcha Bayarou (Fraunhofer Institute for Secure Information Technology, Germany)  
pp. 9-16

***Opportunistically-assisted parking search: a story of free riders, selfish liars and bona fide mules***

Evangelia Kokolaki (National and Kapodistrian University of Athens, Greece); Georgios Kollias (National and Kapodistrian University of Athens, Greece); Maria Papadaki (National and Kapodistrian University of Athens, Greece); Merkourios Karaliopoulos (National and Kapodistrian University of Athens, Greece); Ioannis Stavrakakis (National and Kapodistrian University of Athens, Greece)  
pp. 17-24

### SPS1: Short Paper Session 1: Services and Applications

10:00am-11:30am

***Investigating the Accuracy of Mobile Urban Sensing***

Marco Fiore (National Research Council of Italy, Italy); Alessandro Nordio (IEIIT CNR - Italian National Research Council, Italy); Carla-Fabiana Chiasserini (Politecnico di Torino, Italy)  
pp. 25-28

***Surveillance Service on the Open Mobile Cloud***

Jui-Ting Weng (University of California, Los Angeles, USA); Ian Ku (UCLA, USA); Mario Gerla (University of California at Los Angeles, USA)  
pp. 29-33

***Energy-Efficiency of Concast Communication in Wireless Sensor Networks***

Joachim Wilke (Karlsruhe Institute of Technology (KIT), Germany); Christian Haas (Karlsruhe Institute of Technology, Germany)  
pp. 34-38

***Balloon One: Spontaneous Long-range Emergency Infrastructure from Space for Telemetry and Text***

Tyler Conlon (Clarkson University, USA); Patrick Wilbur (Clarkson University & PFW Research LLC, USA)  
pp. 39-43

### FPS2: Full Paper Session 2: MAC and Resource Management

5:00pm- 6:45pm

***Authenticated Resource Management in Delay-Tolerant Networks using Proxy Signatures***

Dominik Schürmann (TU Braunschweig, Germany); Joerg Ott (Aalto University & Helsinki Institute of Information Technology, Finland); Lars C Wolf (Technische Universität Braunschweig, Germany)  
pp. 44-51

***Efficient MAC for distributed multiuser MIMO systems***

Antonios Michaloliakos (University of Southern California, USA); Ryan Rogalin (University of Southern California, USA); Horia Vlad Balan (University of Southern California, USA); Konstantinos Psounis (University of Southern California, USA); Giuseppe Caire (University of Southern California, USA)  
pp. 52-59

***PULLCAST: Peer-Assisted Video Multicasting for Wireless Mesh Networks***

Alessandro Russo (University of Trento, Italy); Renato Lo Cigno (University of Trento, Italy)  
pp. 60-67

***Estimating the Primary User Location and Transmit Power in Cognitive Radio Systems Using Extended Kalman Filters***

Janis Werner (Tampere University of Technology, Finland); Aki Hakkarainen (Tampere University of Technology, Finland); Mikko Valkama (Tampere University of Technology, Finland)  
pp. 68-73

## **KEYNOTE TALK: Prof. Edward Knightly**

7:00pm-8:00pm

## **FPS3: Full Paper Session 3: Special Session on Vehicular Networking**

8:00am-9:30am

***Behind the Scenes: Lessons Learned from the Greatest Intervehicular Accident Detection Test Ever***

Gustavo Marfia (Università di Bologna, Italy); Marco Rocchetti (University of Bologna, Italy); Alessandro Amoroso (University of Bologna, Italy); Mario Gerla (University of California at Los Angeles, USA)  
pp. 74-78

***Governing Energy for Parked Cars***

Riccardo Crepaldi (University of Illinois at Urbana-Champaign, USA); Ryan Welsh (University of Illinois at Urbana-Champaign, USA); Robin Kravets (University of Illinois at Urbana-Champaign, USA)  
pp. 87-94

## **PS: Poster Session**

9:45am-11:15am

***Opportunistic Clusters Selection in a Reliable Enhanced Broadcast Protocol for Vehicular Ad hoc Network***

Anna Maria Vegni (University of ROMA TRE, Italy); Alessio Stramacci (University of Roma Tre, Italy); Enrico Natalizio (Université de Technologie de Compiègne, France)  
pp. 95-97

***Sampling and Transport Co-design in Wireless Sensor Networks***

Vinay Sachidananda (TU Darmstadt, Germany); Abdelmajid Khelil (TU Darmstadt, Germany); David Noack (TU Darmstadt, Germany); Neeraj Suri (Technical University of Darmstadt, Germany)  
pp. 98-100

***Exploiting Topology and Behavioural Attributes for Effective Routing in Mobile Networks***

Ioannis Manolopoulos (Demokritos Research Center, Greece); Kimon Kontovasilis (NCSR Demokritos, Greece); Ioannis Stavarakakis (National and Kapodistrian University of Athens, Greece); Stelios Thomopoulos (Inst. of Informatics & Telecommunications, NCSR "Demokritos", Greece)  
pp. 101-103

***Robustness Improvement for Mobile P2P Network by the Byzantine Agreement Problem***

Hui-Ching Hsieh (Hsing Wu University, Taiwan)  
pp. 104-106

***Beamforming-Based Broadcast Scheme for Multihop Wireless Networks with Transmission Range Adjustment***

Ahmed Soua (Institut Telecom, France); Walid Ben-Ameur (Telecom SudParis, France); Hossam Afifi (Institut Telecom & Paris South, France)  
pp. 107-109

***Moversight: An Approach to Support Mobility in Collaborative Applications***

Jan Gäbler (BTU Cottbus, Germany); Hartmut Koenig (BTU Cottbus, Germany)  
pp. 110-112

***Multi-objective Optimization Model for Network Selection in Multihomed Devices***

German Castignani (University of Luxembourg / SnT, Luxembourg); Nicolas Montavont (Institut Telecom / Telecom Bretagne, France); Andrés Arcia (Universidad de Los Andes, Venezuela)  
pp. 113-115

***LTE Resource Scheduling for Vehicular Safety Applications***

Lung-Chih Tung (University of California, Los Angeles, USA); Mario Gerla (University of California at Los Angeles, USA)  
pp. 116-118

***A Stochastic Geometry Approach to Model the Shadow Fading for Mobile Ad-Hoc Networks***

Jörg Fischer (FAU Erlangen-Nürnberg, Germany); Frederik Beer (Friedrich-Alexander University Erlangen-Nuremberg, Germany); Hendrik Lieske (Friedrich-Alexander University Erlangen-Nuremberg, Germany); Joerg Robert (Friedrich-Alexander University Erlangen-Nuremberg, Germany); Jörn Thielecke (Universität Erlangen, Germany); Albert Heuberger (Friedrich-Alexander University Erlangen-Nuremberg, Germany)  
pp. 119-121

***The Analysis of the Additive-Increase Multiplicative-Decrease MAC Protocol***

Ke Li (University of Alberta, Canada); Ioanis Nikolaidis (University of Alberta, Canada); Janelle Harms (University of Alberta, Canada)  
pp. 122-124

***Network Selection for Autonomous Mobile Devices***

Toktam Mahmoodi (King's College London, United Kingdom)  
pp. 125-127

***Self-Organized Context-Aware Hybrid MANETs***

Chenyu Zheng (University of Colorado at Boulder, USA); Lijun Chen (University of Colorado at Boulder, USA); Douglas Sicker (University of Colorado, USA)  
pp. 128-130

## **FPS4: Full Paper Session 4: Localization Services**

5:00pm-6:45pm

***Fuzzy Logical Coordinates and Location Services for Scalable Addressing in Wireless Networks***

Hanno Wirtz (RWTH Aachen University, Germany); Muhammad Hamad Alizai (RWTH Aachen University, Germany); Klaus Wehrle (RWTH Aachen University, Germany)  
pp. 131-138

***A Propagation-Centric Transmitter Localization Method for Deriving the Spatial Structure of Opportunistic Wireless Networks***

Andreas Achtzehn (RWTH Aachen University, Germany); Ljiljana Simić (RWTH Aachen University, Germany); Peter Gronerth (RWTH Aachen University, Germany); Petri Mähönen (RWTH Aachen University, Germany)  
pp. 139-146

***Characterizing Content Sharing Properties for Mobile Users in Open City Squares***

Michael Solomon Desta (Aalto University, Finland); Esa Hyytiä (Aalto University, Finland); Joerg Ott (Aalto University & Helsinki Institute of Information Technology, Finland); Jussi Kangasharju (University of Helsinki, Finland)  
pp. 147-154

**Primary User Localization in Cognitive Radio Networks Using Sectorized Antennas**

Janis Werner (Tampere University of Technology, Finland); Jun Wang (UCLA, USA); Aki Hakkarainen (Tampere University of Technology, Finland); Mikko Valkama (Tampere University of Technology, Finland); Danijela Cabric (University of California Los Angeles, USA)  
pp. 155-161

**KEYNOTE TALK: Prof. Giuseppe Bianchi**

7:00pm-8:00pm

**FPS5: Full Paper Session 5: Vehicular Networking #2**

8:00am-9:30am

**Use Both Lanes: Multi-Channel Beaconing for Message Dissemination in Vehicular Networks**

Florian Klingler (University of Innsbruck, Austria); Falko Dressler (University of Innsbruck, Austria); Jiannong Cao (Hong Kong Polytechnic Univ, Hong Kong); Christoph Sommer (University of Innsbruck, Austria)  
pp. 162-169

**On the Evaluation of Make-Before-Break Handovers in Urban WiFi Networks for Moving Vehicles**

Mouton Maximilien (University of Luxembourg, Luxembourg); German Castignani (University of Luxembourg / SnT, Luxembourg); Raphael Frank (University of Luxembourg, Luxembourg); Lara Codeca (University of Luxembourg, Luxembourg); Thomas Engel (University of Luxembourg, Luxembourg)  
pp. 170-177

**Highway Propagation Modeling in VANETs and Its Impact on Performance Evaluation**

Henrik Schumacher (Leibniz Universität Hannover, Germany); Hugues Tchouankem (Leibniz Universität Hannover & Institute of Communications Technology (IKT), Germany)  
pp. 178-185

**SPS2: Short Paper Session 2: Technologies for Wireless Networking**

9:45am-11:30am

**A Heuristic Header Error Recovery Scheme for RTP**

Florian Schmidt (RWTH Aachen University & Communication and Distributed Systems, Germany); David Orlea (RWTH Aachen University, Germany); Klaus Wehrle (RWTH Aachen University, Germany)  
pp. 186-190

**Balancing the Requirements for a Zero False Negative and Zero False Positive Rate in DSRC-based Forward Collision Warning**

Natalya An (Karlsruhe Institute of Technology (KIT), Germany); Michael Maile (Mercedes-Benz Research & Development North America, Inc., USA); Daniel Jiang (Mercedes-Benz Research & Development North America, Inc., USA); Jens Mittag (Karlsruhe Institute of Technology, Germany); Hannes Hartenstein (Karlsruhe Institute of Technology, Germany)  
pp. 191-195

**A Performance Study of Cooperative Awareness in ETSI ITS G5 and IEEE WAVE**

David Eckhoff (University of Erlangen, Germany); Nikoletta Sofra (Audi Electronics Venture GmbH, Germany); Reinhard German (University of Erlangen, Germany)  
pp. 196-200

**Irregular Repetition Slotted ALOHA with Multiuser Detection**

Majid Ghanbarinejad (University of Alberta, Canada); Christian Schlegel (Dalhousie University, USA)  
pp. 201-205