

# **2012 IEEE Vehicular Networking Conference**

## **(VNC 2012)**

**Seoul, South Korea**  
**14 – 16 November 2012**



**IEEE Catalog Number:** CFP12VNC-PRT  
**ISBN:** 978-1-4673-4995-6

# Program

## O: Opening

### K1: Keynote

Visual Communications and the Augmented Driver  
**Marco Gruteser, Winlab, Rutgers University, USA**

## B: Coffee Break

### S1: Data Dissemination

#### **Fair and Adaptive Data Dissemination for Traffic Information Systems**

Ramon Schwartz (University of Twente, The Netherlands); Anthony Ohazulike (University of Twente, The Netherlands); Christoph Sommer (University of Innsbruck, Austria); Hans Scholten (University of Twente, The Netherlands); Falko Dressler (University of Innsbruck, Austria); Paul Havinga (University of Twente, The Netherlands)  
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#### **An Analytical Model for Beaconing in VANETs**

Emiel Martijn van Eenennaam (University of Twente, The Netherlands); Anne Remke (University of Twente, The Netherlands); Geert Heijenk (University of Twente, The Netherlands)  
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#### **Improving VANET Protocols Via Network Science**

Romeu Monteiro (Universidade de Aveiro, Portugal); Susana Sargent (Instituto de Telecomunicações, Universidade de Aveiro, Portugal); Wantanee Viriyasitavat (CMU, USA); Ozan Tonguz (Carnegie Mellon University, USA)  
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### S2: Applications

#### **To Crash or Not to Crash: Estimating Its Likelihood and Potentials of Beacon-based IVC Systems**

Stefan Joerer (University of Innsbruck, Austria); Michele Segata (University of Innsbruck, Austria); Bastian Bloessl (University of Innsbruck, Austria); Renato Lo Cigno (University of Trento, Italy); Christoph Sommer (University of Innsbruck, Austria); Falko Dressler (University of Innsbruck, Austria)  
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#### **Evaluation of Anticipatory Stigmergy Strategies for Traffic Management**

Ryo Kanamori (Nagoya Institute of Technology, Japan); Jun Takahashi (Nagoya Institute of Technology, Japan); Takayuki Ito (Nagoya Institute of Technology, Japan)  
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#### **The See-Through System: From Implementation to Test-Drive**

Pedro Gomes (Instituto de Telecomunicações, DCC/FC - University of Porto, Portugal); Fausto Vieira (University of Porto & Instituto de Telecomunicações, Portugal); Michel Ferreira (Universidade do Porto, Portugal)  
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## B: Coffee Break

### S3: Channel Models

#### **A Statistical Channel Model for Realistic Simulation in VANET**

André Cardote (Instituto de Telecomunicações, Universidade de Aveiro, Portugal); Filipe M Neves (Instituto de Telecomunicações, University of Aveiro, Portugal); Susana Sargento (Instituto de Telecomunicações, Universidade de Aveiro, Portugal); Peter Steenkiste (Carnegie Mellon University, USA)  
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#### **Dice the TX Power - Improving Awareness Quality in VANETs by Random Transmit Power Selection**

Bernhard Kloiber (German Aerospace Center (DLR), Germany); Jérôme Härri (EURECOM, France); Thomas Strang (German Aerospace Center (DLR) & University of Innsbruck, Intelligence on Wheels, Germany)  
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#### **On the Applicability of Two-Ray Path Loss Models for Vehicular Network Simulation**

Christoph Sommer (University of Innsbruck, Austria); Stefan Joerer (University of Innsbruck, Austria); Falko Dressler (University of Innsbruck, Austria)  
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#### **Using EDCA to Improve Vehicle Safety Messaging**

Sarah Sharafkandi (University of Minnesota, USA); Gaurav Bansal (Toyota InfoTechnology Center, USA); John Kenney (Toyota InfoTechnology Center, USA); David Du (University of Minnesota, USA)  
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## K2: Keynote

V2V deployment: remaining security and privacy challenges

**Andre Weimerskirch, ESCRYPt, USA**

## B: Coffee Break

### S4: Trust and Security

#### **Assessment of Node Trustworthiness in VANETs Using Data Plausibility Checks with Particle Filters**

Norbert Bißmeyer (Fraunhofer Institute for Secure Information Technology, Germany); Sebastian Mauthofer (Darmstadt University of Technology, Germany); Kpatcha Bayarou (Fraunhofer Institute for Secure Information Technology, Germany); Frank Kargl (Ulm University & University of Twente, Germany)  
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#### **Understanding Vehicle Related Crime to Elaborate on Countermeasures Based on ADAS and V2X Communication**

Peter Knapik (Volkswagen Group Research, Germany); Elmar Schoch (AUDI AG, Germany); Maik Müller (Volkswagen Group Research, Germany); Frank Kargl (Ulm University & University of Twente, Germany)  
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#### **On the Potential of PUF for Pseudonym Generation in Vehicular Networks**

Jonathan Petit (University of Twente, The Netherlands); Christoph Bösch (University of Twente, The Netherlands); Michael Feiri (University of Twente, The Netherlands); Frank Kargl (Ulm University & University of Twente, Germany)  
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#### **Evaluation of Congestion-based Certificate Omission in VANETs**

Michael Feiri (University of Twente, The Netherlands); Jonathan Petit (University of Twente, The Netherlands); Frank Kargl (Ulm University & University of Twente, Germany)

## P1: Posters - 5 Minute Madness

### **Vehicular Carriers for Big Data Transfers (Poster)**

Raul Adrian Gorcitz (UPMC Sorbonne Universités, France); Yesid Jarma (INRIA, France); Promethee Spathis (LIP6 - University of Paris VI, France); Marcelo Dias de Amorim (UPMC Sorbonne Universités, France); Ryuji Wakikawa (Toyota ITC, USA., Inc. & Keio University, USA); John Whitbeck (UPMC & Thales, France); Vania Conan (Thales Communications & Security, France); Serge Fdida (UPMC Sorbonne Universités, France)  
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### **Towards Collaborative Traffic Sensing Using Mobile Phones (Poster)**

Raphael Frank (University of Luxembourg, Luxembourg); Mouton Maximilien (University of Luxembourg, Luxembourg); Thomas Engel (University of Luxembourg, Luxembourg)  
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### **Prediction of 3G Network Characteristics for Adaptive Vehicular Connectivity Maps (Poster)**

Tobias Pögel (Technische Universität Braunschweig, Germany); Lars C Wolf (Technische Universität Braunschweig, Germany)  
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### **On the Performance Evaluation of VANET Routing Protocols in Large-Scale Urban Environments (Poster)**

Nicholas Loulloudes (University of Cyprus, Cyprus); George Pallis (University of Cyprus, Cyprus); Marios Dikaiakos (University of Cyprus, Cyprus)  
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### **Doppler and/or Beyond-GI Multipath Compensation by Using an Antenna Array for OFDM Receiver (Poster)**

Gao Jing (Niigata University, Japan); Kenichi Mase (Niigata University, Japan)  
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### **Comparisons of Non-Line-Of-Sight Inter-Vehicle Communications in the Urban Environment Between 5.9GHz and 700MHz Bands (Poster)**

Seii Sai (Toyota InfoTechnology Center Co., Ltd., Japan); Takuro Oshida (Toyota InfoTechnology Center Co., Ltd., Japan); Ryokichi Onishi (Toyota InfoTechnology Center Co., Ltd., Japan); Akira Yoshioka (Toyota InfoTechnology Center Co., Ltd., Japan); Hideaki Tanaka (TOYOTA InfoTechnology Center, Japan)  
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### **Using Wireless Communication to Improve Road Safety and Quality of Service At Road Construction Work Sites (Poster)**

David Rylander (Mälardalen University & Volvo Construction Equipment, Sweden); Jakob Axelsson (Mälardalen University & Swedish Institute of Computer Science, Sweden)  
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### **Analysis of Distributed Algorithms for Density Estimation in VANETs (Poster)**

Nabeel Akhtar (Koc University & Lahore University of Management Sciences, Turkey); Sinem Coleri Ergen (Koc University & University of California Berkeley, Turkey); Ozdur Ozkasap (Koc University, Turkey)  
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### **Knowledge-based Dynamic Channel Selection in Vehicular Networks (Poster)**

Sean Rocke (Worcester Polytechnic Institute, USA); Si Chen (Worcester Polytechnic Institute, USA); Rama K Vuyyuru (Toyota Info Technology Center, USA); Onur Altintas (Toyota InfoTechnology Center, Japan); Alexander M. Wyglinski (Worcester Polytechnic Institute, USA)  
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### **An Online Recommendation System for the Taxi Stand Choice Problem (Poster)**

Luis Moreira-Matias (LIAAD - INESC TEC, University of Porto, Portugal); Ricardo Fernandes (Universidade do Porto, Portugal); Joao Gama (University of Porto, Portugal); Michel Ferreira (Universidade do Porto, Portugal); João Mendes-Moreira (LIAAD - INESC TEC & Faculty of Engineering, University of Porto, Portugal); Luis Damas (Geolink, Croatia)  
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## P2: Poster and Demo Session

### S5: Simulation

#### **CAN-based Communication Model for Service-Oriented Driver Assistance Systems**

Marco Wagner (Heilbronn University, Germany); Ansgar Meroth (Heilbronn University, Germany); Dieter Zoebel (University Koblenz-Landau, Germany)  
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#### **Simulative Assessments of IEEE 802.1 Ethernet AVB and Time-Triggered Ethernet for Advanced Driver Assistance Systems and In-Car Infotainment**

Giuliana Alderisi (University of Catania, Italy); Alfio Caltabiano (University of Catania, Italy); Giancarlo Vasta (University of Catania, Italy); Giancarlo Iannizzotto (University of Messina, Italy); Till Steinbach (Hamburg University of Applied Sciences, Germany); Lucia Lo Bello (University of Catania, Italy)  
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#### **VNS: An Integrated Framework for Vehicular Networks Simulation**

Ricardo Fernandes (Universidade do Porto, Portugal); Fausto Vieira (University of Porto & Instituto de Telecomunicações, Portugal); Michel Ferreira (Universidade do Porto, Portugal)  
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#### **Characterization and Modeling of Dissemination Delays in Inter-Vehicle Communication Networks**

Tristan Gaugel (Karlsruhe Institute of Technology (KIT), Germany); Jens Mittag (Karlsruhe Institute of Technology, Germany); Hannes Hartenstein (Karlsruhe Institute of Technology, Germany)  
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## K3: Invited Talk

**Hyun Seo Oh, ETRI, Republic of Korea**

### S6: Infrastructure

#### **Performance Evaluation of Automotive Off-board Applications in LTE Deployments**

Christian Lottermann (BMW Group, Germany); Mladen Botsov (BMW Group Research and Technology & TU München, Germany); Peter Fertl (BMW Group Research and Technology, Germany); Robert Müllner (Telefonica Germany, Germany)  
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#### **Optimal Handing-back Point in Mobile Data Offloading**

Da Zhang (Nanyang Technological University, Singapore); Chai Kiat Yeo (Nanyang Technological University, Singapore)  
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#### **Seamless Horizontal and Vertical Mobility in VANET**

Jorge Dias (Instituto de Telecomunicações, Universidade de Aveiro, Portugal); André Cardote (Instituto de Telecomunicações, Universidade de Aveiro, Portugal); Filipe M Neves (Instituto de Telecomunicações, University of Aveiro, Portugal); Susana Sargent (Instituto de Telecomunicações, Universidade de Aveiro, Portugal); Arnaldo Oliveira (Universidade de Aveiro, Institute of Telecommunications, Portugal)  
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## B: Coffee Break

### S7: Geographic Approaches

#### **DAZL: Density-Aware Zone-based Packet Forwarding in Vehicular Networks**

Rui Meireles (University of Porto & Carnegie Mellon University, Portugal); Peter Steenkiste (Carnegie Mellon University, USA); Joao Barros (University of Porto & Instituto de Telecomunicações, Portugal)  
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#### **An Analytical Model for the Performance of Geographical Multi-Hop Broadcast**

Wouter Klein Wolterink (University of Twente, The Netherlands); Geert Heijenk (University of Twente, The Netherlands); Hans van den Berg (University of Twente, The Netherlands)  
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#### **Efficiency Analysis of Geocast Target Region Specifications for VANET Applications**

Timm Jöchle (Ulm University, Germany); Bjoern Wiedersheim (Ulm University, Germany); Florian Schaub (Ulm University, Germany); Michael Weber (University of Ulm & Faculty of Engineering and Computer Science, Germany)  
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#### **How to Broadcast Efficiently in Vehicular Ad Hoc Networks Without GPS**

Celimuge Wu (University of Electro-Communications, Japan); Satoshi Ohzahata (The University of Electro-Communications & Graduate School of Information Systems, Japan); Toshihiko Kato (University of Electro-Communications, Japan)  
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