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#### JUNE 21

5th Workshop on the Internet of Things: Smart Objects and Services (IoT-SoS 2016)

**IOT-SOS 2016 WORKSHOP PROGRAM** 

8:45-9:00 Welcome

9:00-10:00 Keynote

**10:30-12:00** Session 1 – **IoT** Security

Towards quantifying the cost of a secure IoT: Overhead and energy consumption of ECC signatures on an ARM-based device

Max Mössinger; Benedikt Petschkuhn; Johannes Bauer; Ralf C. Staudemeyer; Marcin Wójcik; Henrich C. Pöhls

Cyber security of smart grids modeled through epidemic models in cellular automata Giulia Cisotto; Leonardo Badia

A practical implementation of an adaptive compressive sensing encryption scheme Alexandros Fragkiadakis; Elias Z. Tragos; Luka Kovacevic; Pavlos Charalampidis

#### QR Code Based Mutual Authentication Protocol for Internet of Things

Tobias Marktscheffel; Wolfgang Popp; Philemon Werli; Wolfram Gottschlich; Simon Dominik Fink; Arne Bilzhause; Hermann de Meer

14:00-15:30 Session 2 – IoT Networking, Services, and Applications

Semantic-based Context Modeling for Quality of Service Support in IoT Platforms Enzo Mingozzi; Giacomo Tanganelli; Carlo Vallati; Belen Martinez; Izaskun Mendia; Marta Gonzalez-Rodriguez

**IoT** Interoperability for Actuating Applications through Standardised M2M Communications Carlos Pereira; António Pinto; Pedro Rocha; Fernando Santiago; Jorge Sousa; Ana C Aguiar

Throughput Analysis of Smart Objects with Delay Constraints Zheng Chen; Nikolaos Pappas; Marios Kountouris; Vangelis Angelakis

RescuePal: a Smartphone-based System to Discover People in Emergency Scenarios Francesco Restuccia; Sajal K. Das; Srinivas Chakravarthi Thandu; Sriram Chellappan

**15:30** Workshop Closing Remarks

#### JUNE 21

International Workshop on Smart Vehicles: Connectivity Technologies and ITS Applications (SmartVehicles 2016)

#### SMART VEHICLES 2016 WORKSHOP PROGRAM

#### 9:00-9:10 Opening Remarks

#### 9:10-10:00 Keynote

Future Prospects for Connected Automated Vehicle Systems
Steven Shladover, California PATH Program, University of California, Berkeley

#### **10:30-12:30** Session 1 – C-ITS Applications

#### Traffic Situation Estimator for Adaptive Cruise Control

Tianyi Yu; Jenny Eden; Cristofer Englund; Tony I Larsson

A Study on Identification of Laser-tracked Vehicles Using V2V-based Velocity Information Atsushi Fujita, Hirozumi Yamaguchi; Teruo Higashino; Mineo Takai

#### Indoor Localization of Vehicles Using Deep Learning

Anil Kumar Tirumala Ravi Kumar; Bernd Schäufele; Oliver Sawade; Ilja Radusch

#### Statistics of Parked Cars for Urban Vehicular Networks

Andre B. Reis; Susana Sargento

12:30-14:00 Poster and Demo Session

14:00-15:30 Session 2 - V2X Congestion Control

Fair Distributed Congestion Control with Transmit Power for Vehicular Networks Esteban Egea-Lopez

Impact of Decentralized Congestion Control on Contention-based Forwarding in VANETs, Sebastian Kühlmorgen; Andreas Festag; Gerhard Fettweis

Evolution of Vehicular Congestion Control Without Degrading Legacy Vehicle Performance Bin Cheng; Ali Rostami; Marco Gruteser; Hongsheng Lu; John Kenney; Gaurav Bansal

16:00-17:30 Session 3 – Smart Vehicle Frameworks, IoT, Cloud, and Security

Integrating Connected Vehicles in Internet of Things Ecosystems: Challenges and Solutions Soumya Kanti Datta; Rui Pedro Ferreira da Costa; Jérôme Härri; Christian Bonnet

Introducing a Harmonized and Generic Cross-Platform Interface Between a Vehicle and the Cloud

Marco Wagner; Jeroen Laverman; Dennis Grewe; Sebastian Schildt

Cooperative ITS Security Framework: Standards and Implementations Progress in Europe Brigitte Lonc; Pierpaolo Cincilla

17:30 Workshop Closing Remarks

#### IEEE WOWMOM 2016 WORKSHOP PROGRAM

#### JUNE 21

1st IEEE Workshop on Fifth Generation Wireless: From Bits to Packets (5GB2P 2016)

#### 5GB2P 2016 WORKSHOP PROGRAM

#### **8:30-8:45 Opening Remarks**

Samah A. M. Ghanem and Daniele Tarchi

#### 8:45-10:00 Keynote 1

Network Coding as 5G Key Enabling Technology Muriel Medard

10:30-11:30 Session 1 – 5G Key Technologies: Network Coding, Full Duplex, Small Cells and Densification

Network coding: connections between information theory and estimation theory

Wideband Self-Interference Cancellation for Better Spectrum Use

Beacons in Dense Wi-Fi Networks: How to Befriend with Neighbors in the 5G World?

#### 11:30-12:30 Keynote 2

Yet Another Plenary on 5G Angel Lozano

14:00-15:30 Session 2 - 5G Waveforms: Wireless, Optical Communications, and mmWave

Experimental Validations of Bandwidth Compressed Multicarrier Signals

Analyses of Orthogonal and Non-Orthogonal Steering Vectors at Millimeter Wave Systems

16:00-17:30 Session 3 – Opportunistic Communications (Hosted Session of AoC)

Code Mobility For On-Demand Computational Offloading

Spatial Locality in Pocket Switched Networks

Virtualization at the Network Edge: A Performance Comparison

17:30 Workshop Closing Remarks

#### JUNE 21

International Workshop on emerging COgnitive Radio Applications and aLgorithms (CORAL 2016)

#### **CORAL 2016 WORKSHOP PROGRAM**

8:30-10:00 Opening and Keynote

10:30-12:00 Session 1

Analysis and implementation of a wavelet based spectrum sensing method for low SNR scenarios

Domenico Capriglione and Gianni Cerro and Luigi Ferrigno and Gianfranco Miele,

Non-integer Bit Estimation for Enhanced {Inter-Picture} Prediction in H.265/HEVC Sio Kei Im and Mohammad Mahdi Ghandi and Ka-Hou Chan

Measurement-Based Study on the Influence of Localization Errors on Estimated Shadow Correlation

Nikos Perpinias and Alexandros Palaios and Janne Riihijärvi and Petri Mähönen,

14:00-15:00 Session 2

A Portable Wireless Sensor Network System for Real-Time Environmental Monitoring Rita Tse and Yubin Xiao

**15:00** Workshop Closing Remarks

#### IEEE WOWMOM 2016 MAIN CONFERENCE PROGRAM

#### **FIRST DAY: JUNE 22**

8:45-9:00 Welcome and opening

9:00-10:00 Keynote I

Towards the Tactile Internet – Low Latency Communications in Connected Cars
Falko Dressler, Head of Distributed Embedded Systems Group, Dept. of Computer Science,
University of Paderborn, Germany

10:30-12:30 Session 1A – D2D Offloading and Communication

Session chair: Daniele Puccinelli, SUPSI, Switzerland

Should I Seed Or Should I Not: On The Remuneration of Seeders in D2D Offloading Filippo Rebecchi (Thales Communications & Security, France); Marcelo Dias de Amorim (UPMC Sorbonne Universités, France); Vania Conan (Thales Communications &; Security, France)

# Have You Asked Your Neighbors? A Hidden Market Approach for Device-to-Device Offloading

Dimitris Chatzopoulos (Hong Kong University of Science and Technology, Hong Kong); Mahdieh Ahmadi (Sharif University of Technology, Iran); Sokol Kosta (Sapienza University of Rome, Italy); Pan Hui (Hong Kong University of Science and Technology &; Telekom Innovation Laboratories, Hong Kong)

## Tie-breaking Can Maximize Fairness without Sacrificing Throughput in D2D-assisted Networks

Vincenzo Mancuso (IMDEA Networks Institute, Spain); Arash Asadi (IMDEA Networks Institute &; University Carlos III of Madrid, Spain); Peter Jacko (Lancaster University, United Kingdom)

#### Reliable and Bidirectional Camera-Display Communications with Smartphones (short paper) Maria Lorena Montoya Freire and Mario Di Francesco (Aalto University, Finland)

#### **10:30-12:30** Session 1B – WiFi Networks

Session chair: Andreas Kassler, Karlstad University, Sweden

#### Revisiting 802.11 Power Consumption Modeling in Smartphone

Swetank Kumar Saha, Pratham Malik, Selvaganesh Dharmeswaran and Dimitrios Koutsonikolas (University at Buffalo, SUNY, USA)

## Performance Evaluation of an Intention Sharing MAC Scheme in Wireless LANs with Hidden Nodes

Emma Fitzgerald (Lund University, Sweden); Michal Pióro (Warsaw University of Technology & Lund University, Poland)

# Evaluation of the IEEE 802.11ah Restricted Access Window Mechanism for dense IoT networks

Le Tian (University of Antwerp, Belgium); Jeroen Famaey (University of Antwerp & iMinds, Belgium); Steven Latré (University of Antwerp - iMinds, Belgium)

# MAC Design on real 802.11 Devices: from Exponential to Moderated Backoff (short paper) Ilenia Tinnirello (University of Palermo, Italy); Menzo Wentink (Qualcomm, USA); Domenico Garlisi and Fabrizio Giuliano (Universita' di Palermo, Italy); Giuseppe Bianchi (University of Rome " Tor Vergata", Italy)

#### 14:00-15:30 Session 2A – Mobile Data Offloading

Session chair: Marco Fiore, IEIIT-CNR, Italy

# How Beneficial is the WiFi Offloading? A Detailed Game-Theoretical Analysis in Wireless Oligopolies

Georgios Fortetsanakis and Maria Papadopouli (University of Crete, Greece)

#### Buddies, not Enemies: Fairness and Performance in Cellular Offloading

Nils Richerzhagen, Björn Richerzhagen, Michael Walter, Dominik Stingl and Ralf Steinmetz (Technische Universität Darmstadt, Germany)

Storage on Wheels: Offloading Popular Contents Through a Vehicular Cloud

Luigi Vigneri and Thrasyvoulos Spyropoulos (EURECOM, France); Chadi Barakat (INRIA Sophia Antipolis, France)

#### **14:00-15:30** Session 2B – Video Streaming

Session chair: Mario Di Francesco, Aalto University School of Science, Finland

Dynamic and Cooperative Mobile Video Streaming Across Heterogeneous Cellular Networks Stefania Colonnese (Università La Sapienza di Roma, Italy); Valentina Salvatore, Luca Chiaraviglio and Francesca Cuomo (University of Rome Sapienza, Italy)

# NEWCAST: Anticipating Resource Management and QoE Provisioning for Mobile Video Streaming

Imen Triki, Rachid El-Azouzi and Majed Haddad (University of Avignon, France)

# SWAP: Protecting Pull-Based P2P Video Streaming Systems From Inference Attacks Giang Nguyen, Stefanie Roos, Benjamin Schiller and Thorsten Strufe (TU Dresden, Germany)

#### 16:00-17:30 Session 3A - Wireless Security

Session chair: Edmundo Monteiro, University of Coimbra, Portugal

# Security Threat Assessment of Simultaneous Multiple Denial-of-Service Attacks in IEEE 802.22 Cognitive Radio Networks

Ismail Ahmed and Abraham O Fapojuwo (University of Calgary, Canada)

# ResFi: A Secure Framework for Self Organized Radio Resource Management in Residential WiFi Networks

Sven Zehl and Anatolij Zubow (Technische Universität Berlin, Germany); Adam Wolisz (TUB, Germany); Michael Doering (Technische Universität Berlin, Germany)

Xcastor: Secure and Scalable Group Communication in Ad Hoc Networks (short paper) Milan Schmittner and Matthias Hollick (Technische Universität Darmstadt, Germany)

#### **16:00-17:30** Session 3B – Channel Resource Sharing and Aggregation

Session chair: Vasilios Siris, Athens University of Economics and Business, Greece

#### Downlink Transmit Power Setting in LTE HetNets with Carrier Aggregation

Zana Limani Fazliu and Carla-Fabiana Chiasserini (Politecnico di Torino, Italy); Gian Michele Dell'Aera (Mobile Communication, Italy)

# Jamming and Advanced Modular-based Blind Rendezvous Algorithms for Cognitive Radio Networks

Young-Hyun Oh and David Thuente (North Carolina State University, USA)

#### Bundling of DSL resources in home environments (short paper)

Nico Bayer (Telekom Innovation Laboratories, Germany); Aman Girmazion (University of Applied Sciences, Germany); Markus Amend (Deutsche Telekom, Germany); Kay Haensge (Telekom Innovation Laboratories, Germany); Roman Szczepanski and Maedot Hailemichael (Deutsche Telekom, Germany

#### **SECOND DAY: JUNE 23**

#### 9:00-10:00 Keynote II

Challenges and Solutions for Millimeter-Wave Wireless Networks

Joerg Widmer, Research Professor at IMDEA Networks Institute, Madrid, Spain

#### 10:30-12:30 Session 4A – Wireless Sensor Networks

Session chair: Adam Wolisz, Technical University of Berlin, Germany

# An Architecture for Sender-based Addressing for Selective Sensor Network Wake-Up Receivers

Johannes Blobel (University of Paderborn, Germany); Janis Krasemann (University Paderborn, Germany); Falko Dressler (University of Paderborn, Germany)

#### A Model-based Beacon Scheduling Algorithm for IEEE 802.15.4e TSCH Networks

Domenico De Guglielmo, Simone Brienza and Giuseppe Anastasi (University of Pisa, Italy)

# Experimental Evaluation of Interference Impact on the Energy Consumption in Wireless Sensor Networks (short paper)

Viktor Toldov (Inria, France); Roman Igual-Pérez, Rahul Vyas and Boe Alexandre (IRCICA, France); Laurent Clavier (Institut Mines-Telecom, Telecom Lille &; IEMN / IRCICA, France); Nathalie Mitton (Inria, France)

#### EcoSensor: Monitoring Environmental Pollution Using Mobile Sensors (short paper)

Oscar Alvear (Universitat Politècnica de València, Spain); Willian Zamora (Universitat Politècnica de València & Universidad Laica Eloy Alfaro de Manabí, Spain); Carlos T. Calafate (Universidad Politécnica de Valencia, Spain); Juan-Carlos Cano (Universidad Politecnica de Valencia, Spain); Pietro Manzoni (Universidad Politécnica de Valencia, Spain)

#### 14:00-15:30 Panel (Moderator: Andreas Mauthe, U. Lancaster, UK)

Challenges of mobile content and interpersonal communications in high demand scenarios

#### 16:00-17:30 Session 5A - mmWave Cellular Networks

Session chair: Dimitrios Koutsonikolas, University of Buffalo, USA

#### Learning from Experience: Efficient Decentralized Scheduling for 60GHz Mesh Networks

Gek Hong Sim (IMDEA Networks Institute, Spain); Rui Li (University of Edinburgh, United Kingdom); Cristina Cano (Inria Lille-Nord Europe, France); David Malone (Maynooth University, Ireland); Paul Patras (The University of Edinburgh, United Kingdom); Joerg Widmer (IMDEA Networks Institute, Spain)

#### Energy Efficient Line-of-Sight Millimeter Wave Small Cell Backhaul: 60, 70, 80 or 140 GHz?

Agapi Mesodiakaki and Andreas J. Kassler (Karlstad University, Sweden); Enrica Zola (Technical University of Catalonia, Spain); Mattias Ferndahl (Gotmic AB, Sweden); Tao Cai (Huawei Technologies Sweden AB, Sweden)

#### Packet Mass Transit: Improving Frame Aggregation in 60 GHz Networks (short paper)

Hany Assasa (IMDEA Networks Institute & Universidad Carlos III, Spain); Adrian Loch and Joerg Widmer (IMDEA Networks Institute, Spain)

#### 16:00-17:30 Session 5B – Mobility and Tracking

Session chair: Yang Liu, Beijing Institute of Technology, China

#### Exploiting Mobility Prediction for Mobility & Popularity Caching and DASH Adaptation

Vasilios A. Siris, Xenofon Vasilakos and Dimitrios Dimopoulos (Athens University of Economics and Business, Greece)

#### Device-free Indoor Localization and Tracking through Human-Object Interactions

Wenjie Ruan (the University of Adelaide, Australia); Quan Z. Sheng (University of Adelaide, Australia); Lina Yao (The University of Adelaide, Australia); Tao Gu (RMIT University, Australia); Longfei Shangguan (Princeton University, USA), Michele Ruta (Politecnico di Bari, Italy)

#### Hybrid Indoor Localization Using Multiple Radio Interfaces (short paper)

Islam Alyafawi, Simon Kiener and Torsten Ingo Braun (University of Bern, Switzerland)

#### **17:30-18:30** Session 6A – Work in Progress

# Enabling Crowdsourced Live Event Coverage with Adaptive Collaborative Upload Strategies Björn Richerzhagen, Julian Wulfheide and Heinz Koeppl (Technische Universität Darmstadt,

Germany); Andreas U. Mauthe (Lancaster University, United Kingdom); Klara Nahrstedt (University of Illinois, USA); Ralf Steinmetz (Technische Universität Darmstadt, Germany)

#### WiseHAUL: An SDN-empowered Wireless Small Cell Backhaul testbed

José Núñez-Martínez (Centre Tecnologic de Telecomunicacions de Catalunya, Spain); Jorge Baranda (Centre Tecnològic de Telecomunicacions de Catalunya (CTTC), Spain); Iñaki Pascual (CTTC, Spain); Josep Mangues-Bafalluy (Centre Tecnològic de Telecomunicacions de Catalunya (CTTC), Spain)

#### How Video Streaming Consumes Power in 4G LTE Networks

Jingyu Zhang (Shanghai Jiao Tong University, China); Gan Fang (The Ohio State University, USA); Minyi Guo (Shanghai Jiao Tong University, China); Chunyi Peng (The Ohio State University, USA)

# Energy-Efficient Cluster-Based Protocol using An Adaptive Data Aggregative Window Function (A-DAWF) for Wireless Sensor Networks

Somasekhar Reddy Kandukuri (University of La Reunion, France); Jean Lebreton (University of La Reunion & LE2P Laboratory, France); Nour Mohammad Murad (University of Reunion, France); Richard Lorion (University La Réunion, France); Jean-Daniel Lan Sun Luk (LE2P, Reunion)

# Wireless Bandwidth Management for Multiple Video Clients through Network-assisted DASH Tiia Ojanperä (VTT Technical Research Centre of Finland, Finland); Heli Kokkoniemi-Tarkkanen (VTT Technical Research Centre of Finland, European Union)

#### An Experimental Hybrid Wireless Platform for Vehicular Networks

Francisco Martin-Fernandez, Pino Caballero-Gil and Cándido Caballero-Gil (University of La Laguna, Spain)

#### On the Authentication of Devices in the Internet of Things

Yaman Sharaf-Dabbagh and Walid Saad (Virginia Tech, USA)

#### LVS: A WiFi-based System to Tackle Location Spoofing in Location-based Services

Francesco Restuccia (Missouri University of Science and Technology, USA); Andrea Saracino (Istituto di Informatica e Telematica, Italy); Sajal K. Das (Missouri University of Science and Technology, USA); Fabio Martinelli (CNR-IIT, Italy)

#### Performance Analysis of Cooperative ARQ Systems for Wireless Industrial Networks

Martin Serror, Yulin Hu, Christian Dombrowski and Klaus Wehrle (RWTH Aachen University, Germany); James Gross (KTH Royal Institute of Technology, Sweden)

#### **17:30-18:30** Session 6B – Demonstrations

#### The SIMulation Project: Demonstrating Mobile Payments Based on Cloud Services

Pascal Urien (Télécom Paris Tech, France); Xavier Aghina (Orange Labs, France)

#### An Autonomous Diagnostic Tool for the WirelessHART Industrial Standard

Duarte Raposo (University of Coimbra, Portugal); André Rodrigues (Centre of Informatics and Systems of the University of Coimbra & Polytechnic Institute of Coimbra, ISCAC, Portugal); Jorge Sá Silva and Fernando Boavida (University of Coimbra, Portugal); José Oliveira (Eneida Wireless & Sensors, S.A., Coimbra, Portugal); Carlos Herrera and Carlos Egas (Escuela Politécnica Nacional, Ecuador)

#### Measuring and Assessing Mobile Broadband Networks with MONROE

Ozgu Alay and Andra Lutu (Simula Research Laboratory, Norway); Rafael García, Miguel Peón Quirós and Vincenzo Mancuso (IMDEA Networks Institute, Spain); Thomas Hirsch (Celerway AS, Norway); Tobias Dély (Celerway, Norway); Jonas Werme, Kristian Evensen and Audun Fosselie Hansen (Simula Research Laboratory, Norway); Stefan Alfredsson, Jonas Karlsson and Anna Brunstrom (Karlstad University, Sweden); Ali Safari Khatouni and Marco Mellia (Politecnico di Torino, Italy); Marco G Ajmone Marsan (Politecnico di Torino & IMDEA Networks, Italy); Roberto Monno (Nextworks, Italy); Håkon Lønsethagen (Telenor R&D, Norway)

#### Cross-Technology Wireless Experimentation: improving 802.11 and 802.15.4e coexistence

Peter Ruckebusch (Ghent University, Belgium); Jan Bauwens (iMinds, Belgium); Bart Jooris (Ghent University, Belgium); Spilios D. Giannoulis (I.S.I. - Industrial Systems Institute, Greece); Eli De Poorter (Ghent University & iMinds, Belgium); Ingrid Moerman (Ghent University - iMinds, Belgium); Domenico Garlisi (Universita' di Palermo & CNIT Italian National Consortium for Telecommunications, Italy); Ilenia Tinnirello and Pierluigi Gallo (University of Palermo, Italy)

#### When Is the Right Time to Transmit in Multi-hop White-Fi?

Nicolò Facchi and Francesco Gringoli (University of Brescia, Italy); David Malone (Maynooth University, Ireland); Paul Patras (The University of Edinburgh, United Kingdom)

#### 17:30-18:30 Session 6C - PhD Forum

#### Enhanced Ultrawideband Methods for 5G LOS Sufficient Positioning and Mitigation

Akeem Aderibigbe Adebomehin and Stuart D Walker (University of Essex, United Kingdom)

#### Busy Tone Based Prioritized Access for Distributed Wireless Networks

Xin Zhou (Institute of Software Chinese Academy of Sciences & University of Chinese Academy of Sciences, P.R. China); Changwen Zheng (Institute of Software Chinese Academy of Sciences, P.R. China)

#### Asynchronous Reputation Systems in Device-to-Device Ecosystems

Dimitris Chatzopoulos (Hong Kong University of Science and Technology, Hong Kong); Pan Hui (Hong Kong University of Science and Technology & Telekom Innovation Laboratories, Hong Kong)

#### Resilient SDN based Small Cell Backhaul Networks using mmWave Bands

Jonathan Vestin and Andreas J. Kassler (Karlstad University, Sweden)

## A SDN Controller Architecture for Small Cell Wireless Backhaul using a LTE Control Channel

Ricardo Santos and Andreas J. Kassler (Karlstad University, Sweden)

#### Towards Content Delivery Optimization In Future Wireless Networks

Pavan Kumar Kamaraju (University Of Maryland Baltimore County & Royal Institute Of Technology KTH, USA)

#### Personal Cloud Interoperability

Jose G Faisca and Jose Q Rogado (Universidade Lusofona, Portugal)

# An Open, NFC Enabler Independent Mobile Payment and Identification Method: NFC Feature Box

Ismail Turk and Ahmet Cosar (Middle East Technical University, Turkey)

#### IEEE WOWMOM 2016 MAIN CONFERENCE PROGRAM

#### **THIRD DAY: JUNE 24**

#### 9:00-10:00 Keynote III

#### Internet of Vehicles: Privacy and Security issues

Mario Gerla, Full Professor for Computer Science at University of California Los Angeles

#### 10:30-12:30 Session 7A – Mobile Opportunistic Networks

Session chair: Giuseppe Anastasi, University of Pisa, Italy

# Multi-Copy Data Dissemination with Probabilistic Delay Constraint in Mobile Opportunistic Device-to-Device Networks

Yang Liu (Beijing Institute of Technology, P.R. China); A M A Elman Bashar (University of Louisiana at Lafayette, USA); Fan Li (Beijing Institute of Technology, P.R. China); Yu Wang (University of North Carolina at Charlotte, USA); Kun Liu (Beijing Institute of Technology, P.R. China)

# A Joint Relay Selection and Buffer Management Scheme for Delivery Rate Optimization in DTNs

Tuan Le and Haik Kalantarian (University of California, Los Angeles, USA); Mario Gerla (University of California at Los Angeles, USA)

#### GSAF: Efficient and Flexible Geocasting for Opportunistic Networks

Aydin Rajaei, Dan Chalmers, Ian Wakeman and George Parisis (University of Sussex, United Kingdom)

# Routing in Delay Tolerant Networks with Fine-Grained Contact Characterisation and Dynamic Message Replication (short paper)

Luming Wan (University of Otage, New Zealand); Haibo Zhang (University of Otago, New Zealand); Feiyang Liu and Yawen Chen (University of Otago, New Zealand)

#### 10:30-12:30 Session 7B - Smart Phone Applications

Session chair: Vasco Pereira, University of Coimbra, Portugal

#### Zephyr: First-Person Wireless Analytics from High-Density In-Stadium Deployments

Nathan Mickulicz, Utsav Drolia, Priya Narasimhan and Rajeev Gandhi (Carnegie Mellon University, USA)

#### Application Recommendation at Places for Mobile Users

Yonghe Liu and Yanliang Liu (The University of Texas at Arlington, USA); Yupeng Hu (Hunan University, P.R. China); Ruiyun Yu (Northeastern University, P.R. China)

#### Population Estimation from Mobile Network Traffic Metadata

Ghazaleh Khodabandelou (Telecom SudParis, University of Paris Saclay, France); Vincent Gauthier (Institut TELECOM; Telecom SudParis; SAMOVAR UMR, France); Mounim El Yacoubi (Telecom SudParis, France); Marco Fiore (National Research Council of Italy, Italy)

#### Feasibility and Accuracy of Hotword Detection using Vibration Energy Harvester

Sara Khalifa, Mahbub Hassan and Aruna Seneviratne (University of New South Wales, Australia)

#### 14:00-15:30 Session 8 - Video Adaptation and Delivery

Session chair: Marília Curado, University of Coimbra, Portugal

#### QoE Aware Video Content Adaptation and Delivery

Pavan Kumar Kamaraju (University Of Maryland Baltimore County &; Royal Institute Of Technology KTH, USA); Pietro Lungaro (Royal Institute of Technology (KTH), Sweden); Zary Segall (KTH Royal Institute of Technology, Sweden)

#### Markov analysis of video transmission based on differential encoded HARQ

Valentina Vadori and Anna Guglielmi (University of Padova, Italy); Leonardo Badia (Università degli Studi di Padova, Italy)

#### A Novel Parallelized Motion Estimation Algorithm for GPU Based Video Encoding

Wenbin Jiang, Pengcheng Wang, Min Long and Hai Jin (Huazhong University of Science and Technology, P.R. China)

#### **15:30** Closing remarks