



The 12th IEEE International Conference on Wireless and
Mobile Computing, Networking and Communications

17 – 19th October 2016 | NEW YORK, USA



Conference Program

WiMob 2016



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Welcome

It is our great pleasure to welcome you to the 12th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob'2016) in New York, USA. Since the 1st WiMob in 2005, the IEEE International Conference on Wireless and Mobile Computing, Networking and Communications has been the key forum for the exchange of knowledge and experience among researchers, developers and practitioners of wireless and mobile technology. For ten years, the International IEEE WiMob conference has provided unique opportunities for researchers and developers to interact, share new results, show live demonstrations, and discuss emerging directions in Wireless Communications, Mobile Networking and Ubiquitous Computing.

Putting together WiMob 2016 has been a team effort. First of all, we would like to thank the authors of all submitted papers. Furthermore, we would like to express our gratitude to the program committee and to all external reviewers, who worked very hard on reviewing papers and providing suggestions for their improvements.

The technical program of the main conference consists of 59 full-papers constituting 28% of acceptance ratio. Moreover, we are proud and thankful of having 2 renowned keynote speakers at the 2016 edition of WiMob: - Dr. Samita Chakrabarti (Ericsson San Jose, USA) and - Prof. Muriel Médard (MIT, USA).

We would also like to thank the organizers of the 6 workshops under WiMob 2016:

- EN4PPDR 2016: Maurizio Casoni (University of Modena and Reggio Emilia, Italy) - eHPWAS 2016: Sébastien Laborie (Université de Pau et des Pays de l'Adour, France), Tayeb Lemlouma (IRISA Lab and Rennes 1 University, France), Abderrezak Rachedi (University Paris-Est Marne-la-Vallée, France) and António Santos (Fraunhofer Portugal AICOS, Portugal) – SEUNET 2016 : Saida Maaroufi (LARIM, École Polytechnique de Montréal, Canada) and Haidar Safa (American University of Beirut, Lebanon) - STWiMob 2016: Abderrahim Benslimane (University of Avignon, France).

We would like to thank our General co-chair Azzam Mourad for his efforts in hosting WiMob 2016 at the LAU in New York, USA and for his strong help for the entire local organization. Also, we would like to thank as well as our General co-chair Peter Mueller (IBM, Zurich Research Laboratory, Switzerland) for having handled all the technical activity of the conference, the Symposium chairs and co-chairs: Xianfu Lei (Southwest Jiaotong University, Chengdu, China) and Qingjiang Shi (Zhejiang Sci-Tech University, China) for handling the Wireless Communications symposium;

Stefano Avallone (University of Naples, Italy) and Casimer DeCusatis (Marist, USA) for handling the Wireless Networking, Mobility and Nomadicity symposium;

Hassnaa Moustafa (INTEL USA) and Habtamu Abie (Norwegian Computing Centre, Norway) for handling the Ubiquitous Computing, Services and Applications symposium; Shengrong Bu (University of Glasgow, UK) and Hongjian Sun (Durham University, UK) for managing Green and Sustainable Communications and Network Computing symposium and Rongxing Lu (Nanyang Technological University, Singapore) and Hadi Otrok (Khalifa University, UAE) for managing the Security on Wireless and Mobile Networks symposium.

Without the help of the publicity co-chairs WiMob will not have had such a success; so, many thanks to Stefano Basagni (Northeastern University, USA), Maurizio Casoni (University of Modena and Reggio Emilia, Italy) and Sanaa Sharafeddine (LAU, Lebanon). Our thanks also go to Sawsan Abdul Rahman (LAU, Lebanon) for handling all aspects of the web site.

Also, we would like to thank Victor Leung (University of British Columbia, Canada), Scott Fowler (Linköping University, Sweden) and Song Guo (Aizu University, Japan) for handling all aspects of the workshops start-up.

Finally, we would like to thank our sponsors IEEE, IEEE Computer Society and TCCC, the Technical Committee on Computer Communications, for endorsing the conference and the Lebanese American University at New York for hosting WiMob 2016 and for their support of this conference.

We hope that you will find this program interesting and thought-provoking and that it will provide you with a valuable opportunity to share ideas with other researchers and practitioners from institutions around the world.

Abderrahim Benslimane
WiMob 2016 General Chair
University of Avignon,
France

Peter Mueller
WiMob 2016 General Co-Chair
IBM Zurich,
Switzerland

Azzam Mourad
WiMob 2015 General Co-Chair
Lebanese American University,
Lebanon

Program Overview

Monday, October 17

08:30 - 13:00 Registration (Faculty 500)			
501A	501B	502A	503
09:00 - 10:30 S1	09:00 - 10:30 H1	09:00 - 10:30 E1(3)	09:00 - 10:30 N1
10:30 - 11:00 Coffee Break			
11:00 - 12:30 S2	11:00 - 12:30 H2	11:00 - 12:30 E2(4)	11:00 - 12:30 S3
12:30 - 14:00 Lunch			
14:00 - 15:30 S4	14:00 - 15:30 S5	14:00 - 15:30 S6(2)	14:00 - 15:30
15:30 - 16:00	15:30 - 16:00	15:30 - 16:00	15:30 - 16:00
16:00 - 17:30	16:00 - 17:30	16:00 - 17:30	16:00 - 17:30
19:00 Welcome Cocktail			

When not indicated between brackets it is 4 papers.

Legend:

Workshops: **E**: EN4PPDER – **H**: eHPWAS – **N**: SEUNet – **S**: STWiMob
 Main Conference: **U**: WiMob UCSA track – **W**: WiMob WC track – **M**: WiMob WNMN track –
G: WiMob GSCN track – **Se**: WiMob SWMN track
 Rooms for sessions: NY 501 A, 501 B, 502 A and 503
 General Session Keynote Talks: 401 A, B and C

Tuesday, October 18

08:30 - 13:00 Registration (Faculty 500)		
08:30 - 09:00 Opening Ceremony (401A, B, C)		
09:30 - 10:30 Keynote Speaker: (401A, B, C)		
501A	501B	502A
10:30 - 11:00 Coffee Break		
11:00 - 12:30 M1	11:00 - 12:30 W1	11:00 - 12:30 U1
12:45 - 14:00 Lunch		
14:00 - 15:30 M2	14:00 - 15:30 W2	14:00 - 15:30 U2
15:30 - 16:00 Coffee Break		
16:00 - 17:30 M3	16:00 - 17:30 W3	16:00 - 17:30 M6(2) + G2(2)
20:00 Conference Banquet		

When not indicated between brackets it is 4 papers.

Legend:

Workshops: **E:** EN4PPDER – **H:** eHPWAS – **N:** SEUNet – **S:** STWiMob

Main Conference: **U:** WiMob UCSA track – **W:** WiMob WC track – **M:** WiMob WNMN track –

G: WiMob GSCN track – **Se:** WiMob SWMN track

Rooms for sessions: NY 501 A, 501 B, 502 A and 503

General Session Keynote Talks: 401 A, B and C

Wednesday, October 19

08:30 - 13:00 Registration (Faculty 500)		
09:30 - 10:30 Keynote Speaker: (401A, B, C)		
501A	501B	502A
10:30 - 11:00 Coffee Break		
11:00 - 12:30 M4	11:00 - 12:30 W4(3)	11:00 - 12:30 Se1
12:45 - 14:00 Lunch		
14:00 - 15:30 M5	14:00 - 15:30 G1	14:00 - 15:30 Se2
15:30 - 16:00	15:30 - 16:00	15:30 - 16:00
16:00 - 17:30	16:00 - 17:30	16:00 - 17:45

When not indicated between brackets it is 4 papers.

Legend:

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 Rooms for sessions: NY 501 A, 501 B, 502 A and 503
 General Session Keynote Talks: 401 A, B and C

Monday, October 17

09:00 – 10:30

Room: 501A

S1: Performance and Efficiency

Chair: Baver Ozceylan (Middle East Technical University, Turkey)

Energy Performance Evaluation Revisited: Methodology, Models and Results

Magnus Olsson and Sibel Tombaz (Ericsson Research, Sweden); István Gódor (Ericsson Research, Hungary); Pål Frenger (Ericsson Research, Ericsson AB, Sweden)

Energy Performance of 5GNX Radio Access at Country Level

Sibel Tombaz (Ericsson Research, Sweden); Pål Frenger (Ericsson Research, Ericsson AB, Sweden); Magnus Olsson (Ericsson Research, Sweden); Andreas Nilsson (Ericsson AB, Sweden)

A Method for Providing Energy Efficient Neighborhood Maintenance in MANETs

Berk Unlu, Baver Ozceylan and Buyurman Baykal (Middle East Technical University, Turkey)

RPL Load Balancing via Minimum Degree Spanning Tree

Marwa Mamdouh, Khaled Elsayed and Ahmed Khattab (Cairo University, Egypt)

Room: 501B

H1: eHealth Frameworks based on Devices and Sensors

Chair: Hassnaa Moustafa (Intel, USA)

Security Framework for Portable NFC Mobile Based Health Record System

Divyashikha Sethia (Delhi Technological University, India); Huzur Saran (Indian Institute of Technology, India); Daya Gupta (Delhi Technological University, India)

An Incremental Relay Based Cooperative Routing Protocol for Wireless Inbody Sensor Networks

Yangzhe Liao, Mark S Leeson and Matthew D Higgins (University of Warwick, United Kingdom); Chenyao Bai (University Of Warwick, United Kingdom)

The Daredevil Device

Chris DeJarlais (University of Washington Tacoma, USA)

Remote Monitoring and Medical Devices Control in eHealth

Hassnaa Moustafa (Intel, USA); Eve M Schooler (Intel Corporation, USA); Gang Shen (Intel, USA); Sanjana amath (Intel Corporation, USA)

Room: 502A

E1: Architectures and Algorithms

Chair: Martin Klapez (University of Modena and Reggio Emilia, Italy)

Reliability of SATCOM Transmission for PPDR Usage

Henryk Gierszal (Adam Mickiewicz University, Poland); Łukasz Kiedrowski, Dariusz Korzeniowski, Kamil Pluciński and Łukasz Brajer (ITTI, Poland); Piotr Tyczka (ITTI Sp. z o. o., Poland); Michail Tsagkaropoulos TELETEL S.A., Greece); Evangelos Sdongos (Institute of Communication and Computer Systems & National Technical University of Athens, Greece); Pedro Antonio (TEKEVER SA, Portugal); Natasha McCrone (Rinicom Ltd., United Kingdom); James Jackson (Rinicom Ltd, United Kingdom)

Emergency AdHoc Networks by Using Drone Mounted Base Stations for a Disaster Scenario

Margot Deruyck (Ghent University/iMinds INTEC Waves); Jorg Wyckmans (Ghent University/iMinds INTEC Waves, Belgium); Luc Martens (Ghent University, Belgium); Wout Joseph (Ghent University/iMinds, Belgium)

Bayesian Network Modeling for Public Safety Network Reliability Analysis

Salma Ktari (LIP6, France); Stefano Secci (University Pierre et Marie Curie Paris 6, France); Damien Lavaux (Thales Communications, France)

Room: 503

N1: Smart Environments and Urban Networking

Chair: Saida Maaroufi (Ecole Polytechnique de Montréal, Canada)

Intelligent Mobile Messaging for Urban Networks

Behrooz Shahriari (SJSU, USA); Melody Moh (San Jose State University, USA)

Rethinking Offloading WiFi Access Point Deployment from User Perspective

Eyuphan Bulut (Virginia Commonwealth University, USA); Boleslaw K Szymanski (Rensselaer Polytechnic Institute, USA)

Enabling Smart Environments by avoiding TCP Congestion through PINK: a no-drop AQM

Carlo Augusto Grazia, Natale Patriciello, Martin Klapez and Maurizio Casoni (University of Modena and Reggio Emilia, Italy)

Driver Assistance through an Autonomous Safety Management Framework

Theodore Zographos (Harokopio University of Athens, Greece); George Dimitrakopoulos (Harokopion University of Athens, Greece); Dimosthenis Anagnostopoulos (Harokopio University of Athens, Greece)

11:00 – 12:30

Room: 501A

S2: Cooperative Networks

Chair: Cheng Leong Lim (University of Glasgow, Singapore)

MultiCell Processing with Limited Cooperation: A Novel Framework to Timely Designs and Reduced Feedback

Samah A. M. Ghanem (Independent Researcher, unknown); Munnujahan Ara (Khulna University & Science Engineering and Technology School, Bangladesh)

Improving Energy Balance and Network Connectivity in Wireless Sensor Networks Employing Cooperative Communication

Camila F. Rego, Rodrigo Bezerra and Jacir Luiz Bordim (University of Brasilia, Brazil)

SelfStopping Epidemic Routing in Cooperative Wireless Mobile Sensor Networks

Zesheng Chen (IPFW, USA); Chao Chen (Purdue University Fort Wayne, USA)

On scheduling and resource allocation in cluster-based cooperative MIMO-OFDMA cellular networks

Felip RieraPalou and Guillem Femenias (University of the Balearic Islands, Spain)

Room: 501B

H2: eHealth Architectures and Services

Chair: Mario Cannataro (Università Magna Graecia, Italy)

DIETOS: a recommender system for adaptive diet monitoring and personalized food suggestion

Giuseppe Agapito (University of Catanzaro, Italy); Barbara Calabrese (University Magna Graecia of Catanzaro, Italy); Pietro Guzzi (University of Catanzaro, Italy); Mario Cannataro (Università Magna Graecia, Italy); Mariadelina Simeoni, Ilaria Care, Theodora Lamprinoudi, Giorgio Fuiano and Arturo Pujia (University of Catanzaro, Italy)

Distributed Interfaces and ContextOriented Broadcast Services in a SmartHome Environment

José Manuel Negrete Ramírez (Université de Pau et de Pays de l'Adour IUT Bayonne LIUPPA, France); Philippe Roose (University of Pau IUT de Bayonne & LIUPPA Research Lab, France); Marc Dalmau (University of Pau IUT de Bayonne, France)

ubiSleep: An Ubiquitous Sensor System for Sleep Monitoring

Nuno Pombo (University of Beira Interior & BSAFE Lab, Portugal); Nuno M. Garcia (Universidade da Beira Interior & Instituto de Telecomunicações, Universidade Lusófona de Humanidades e Tecnologias, Portugal)

Infection Tracing in Smart Hospitals

Mimonah Al Qathrady and Ahmed Helmy (University of Florida, USA); Khalid Almuzaini (King Abdulaziz City for Science and Technology, Saudi Arabia)

Room: 502A

E2: Networking and Protocols

Chair: Maurizio Casoni (University of Modena and Reggio Emilia, Italy)

Rapid Mobile Development with ARC: Application Framework for Robust Communications for Disaster Risk Reduction and Management

Danah Veronica Torres (University of the Philippines Diliman, Philippines); Monica Kathrina Villanoy and Jan Vincent Santos (University of the Philippines, Philippines); Cedric Angelo Festin (Networks and Distributed Systems Lab, Philippines); John Norman Doctor and Roel Ocampo (University of the Philippines, Philippines)

Performance Evaluation of Backpressure Routing in Integrated Satelliteterrestrial Backhaul for PPDR Networks

Natale Patriciello and Carlo Augusto Grazia (University of Modena and Reggio Emilia, Italy); José NúñezMartínez (Centre Tecnològic de Telecomunicacions de Catalunya, Spain); Jorge Baranda and Josep ManguésBafalluy (Centre Tecnològic de Telecomunicacions de Catalunya (CTTC), Spain); Maurizio Casoni (University of Modena and Reggio Emilia, Italy)

Implementation and Benchmarking of a Novel Routing Protocol for Tactical Mobile AdHoc Networks

Dhafer Ben Arbia (Qatar Mobility Innovations Center & SERCOM Lab, Polytechnic School of Tunisia, University of CarthageTunisia, Qatar); Muhammad Mahtab Alam (Qatar Mobility Innovation Center, Qatar); Abdullah Kadri (Qatar Mobility Innovations Center, Qatar); Rabah Attia (SERCOM Labs EPT Université de Carthage La Marsa Tunis, Tunisia); Elyes Ben Hamida (Qatar Mobility Innovations Center (QMIC), Qatar)

Towards Massively Multipath Transmissions for Public Safety Communications

Martin Klapez, Carlo Augusto Grazia and Maurizio Casoni (University of Modena and Reggio Emilia, Italy)

Room: 503

S3: Cognitive Networks

Chair: Ahmad Saad (Fraunhofer Institute for Embedded Systems and Communication Technologies ESK, Germany)

A ConstraintBased Routing Algorithm for Cognitive Adhoc Networks

Mehdi Golestanian and Christian Poellabauer (University of Notre Dame, USA)

Rate Enhancement in Cognitive Radio Networks Using Multilevel Power Transmission strategy

Shabnam Khomejani (Kings College London, United Kingdom); Huan X Nguyen (Middlesex University, United Kingdom); Arumugam Nallanathan and Hamid Aghvami (King's College London, United Kingdom)

Analysis of Spectrum Adaptation and Spectrum Leasing in Heterogeneous Traffic Cognitive Radio Networks

Mario A. RamírezReyna (CINVESTAVIPN, Mexico); Felipe A. CruzPérez (CinvestavIPN, Mexico); S. Lirio CastellanosLopez (UAM, Mexico); Genaro HernandezValdez (UAMA, Mexico); Mario E. RiveroAngeles (Instituto Politecnico Nacional & CICIPN, Mexico)

14:00 – 15:30

Room: 501A

S4: Application Oriented Networking

Chair: Hassnaa Moustafa (Intel, USA)

Pay by Data

Chao Wu and Karun Matharu (Imperial College London, United Kingdom)

TrustBased Decision Making for Environmental Health Community of Interest IoT Systems

Hamid AlHamadi (Kuwait University, Kuwait); IngRay Chen (Virginia Tech, USA)

Challenges in Building Continuous Smartphone Sensing Applications

Afzal Hossain and Christian Poellabauer (University of Notre Dame, USA)

IP Subnet Negotiation in WiFi Direct for Seamless MultiGroup Communications

Ahmed Amer Shahin (University of Maryland Baltimore County & Zagazig University, USA); Mohamed Younis (University of Maryland Baltimore County, USA)

Room: 501B

S5: Wireless Networks

Chair: Corinna Schmitt (University of Zurich, Switzerland)

On The Use Of Spatial Modulation In Aeronautical Communications

Bilel Raddadi and Nathalie Thomas (University of Toulouse, France); Charly Poulliat (INP ENSEEIHT Toulouse, France); MarieLaure Boucheret (University of Toulouse IRIT Enseeiht, France)

Joint User Association, Scheduling and Power control in MultiCell Networks

Bilal Maaz (University of Versailles, France); Kinda Khawam (Université de Versailles, France); Yezekael Hayel (LIA, University of Avignon, France); Samer Lahoud (IRISA, University of Rennes 1, France); Steven Martin (ParisSud University, France); Dominique Quadri (LRI, France)

Refining the Impact of Partially Overlapping Channels in Wireless Mesh Networks through a CrossLayer Optimization Model

Amel Faiza Tandjaoui and Mejdji Kaddour (University of Oran 1, Algeria)

Predicting Types of Failures in Wireless Sensor Networks Using an Adaptive NeuroFuzzy Inference System

Cheng Leong Lim and Cindy Goh (University of Glasgow, Singapore); Asiya Khan (University of Plymouth, United Kingdom); Aly Syed (NXP semiconductors, The Netherlands); Yun Li (University of Glasgow, United Kingdom)

Room: 502A

S6: Software Defined Networks

Chair: Martin Klapez (University of Modena and Reggio Emilia, Italy)

Preemptive Flow Management in Future SDNized Wireless Networks

Manzoor Ahmed Khan (TU Berlin, Germany); XuanThuy Dang (Technical University of Berlin & GTARCgGmbH, Germany); Sebastian Peters (TU Berlin & DAI Labor, Germany)

Achieving Throughput Fairness in Smart Grid Using SDNBased Flow Aggregation and scheduling

Wei Guo (University of Oklahoma, USA); Veeramani Mahendran and Sridhar Radhakrishnan (University of Oklahoma, USA)

Tuesday, October 18

09:30 – 10:30

Room: 401A, B, C

Keynote1: Next Generation Wireless Technology and the Cloud Network

Dr. Samita Chakrabarti, Ericsson San Jose

Chair: Abderrahim Benslimane (University of Avignon & LIA/CERI, France)

11:00 – 12:30

Room: 501A

M1: Energy and Power Efficiency

Chair: Joelle Klaimi (Université Libanaise, Lebanon)

Energy Efficient Local Search Based Target Localization in an UWSN

Nazia Majadi (Griffith University, Bangladesh); Mahmuda Naznin (Bangladesh University of Engineering and Technology (BUET), Bangladesh); Toufique Ahmed (Bangladesh University of Engineering and Technology, Bangladesh)

Throughput and Energy Consumption Evaluation in Directional Antennas Mesh Networks

Iyad Lahsen Cherif (Paris Sud, France); Lynda Zitoune (ESIEEParis, France); Véronique Vèque (University of ParisSud 11, France)

Evaluation of Energy Aware Routing Metrics for RPL

Lilia Lassouaoui and Stephane Rovedakis (CNAM/CédricSEMPIA, France); Françoise Sailhan (CANM, France); Anne Wei (Conservatoire National des Arts et Métiers, France)

Indoor Deployment of LowPower Wide Area Networks (LPWAN): a LoRaWAN case study

Pierre Neumann and Julien Montavont (ICube Laboratory (CNRS) University of Strasbourg, France); Thomas Noel (University of Strasbourg, France)

Room: 501B

W1: MIMO Technologies

Chair: Ahmed Ibrahim (University of Virginia, USA)

A New Reconfigurable Antenna Scheme and its Application to Vehicle-to-Vehicle Communications

Petros S. Bithas, Antonis Aspreas and Athanasios G. Kanatas (University of Piraeus, Greece)

Increasing Throughput in Multiuser Three-User MIMO Networks Using Successive Relaying and IRI Cancellation

Fadhel Alhumaidi and Jacek Kłoz (Dalhousie University, Canada)

Fast Convergence for Efficient Beamforming in Massive MIMO Heterogeneous Networks

Malcolm Sande and Bodhaswar TJ Maharaj (University of Pretoria, South Africa); Soumaya Hamouda (Ecole Supérieure des Communications de Tunis, Tunisia)

Orthogonal Signal Space Alignment for MIMO Channels with Redundant Antennas

Xueying Yuan, Zichao Zhou and Jacek Kłoz (Dalhousie University, Canada)

Room: 502A

U1: Protocols and Algorithms For Next Generation Mobile Services

Chair: Hassnaa Moustafa (Intel, USA)

Device-to-Device Coupon Distribution using Economic Routing Utilities

Faezeh Hajiaghajani and Subir Biswas (Michigan State University, USA)

Caching Strategies Based on Popularity Prediction in Content Delivery Networks

Nesrine Ben Hassine (INRIA, France); Dana Marinca (UVSQ, France); Pascale Minet (INRIA, France); Barth Dominique (University of Versailles, France)

Opportunistic Mobile Social Networks: Challenges Survey and Application in Smart Campus

Maha Kadadha and Rabeb Mizouni (Khalifa University, United Arab Emirates (UAE)); Hamda AlAli (Khalifa University of Science, Technology and Research, United Arab Emirates (UAE)); Maha Al Mufti (ETIC/Khalifa University of Science Technology and Research, United Arab Emirates (UAE)); Amira AlAamri (Khalifa University of Science, Technology and Research, United Arab Emirates (UAE))

Boda-RTC: Productive Generation of Portable, Efficient Code for Convolutional Neural Networks on Mobile Computing Platforms

Matthew Moskewicz and Forrest Iandola (UC Berkeley, USA); Kurt Keutzer (University of California, Berkeley, USA)

14:00 – 15:30

Room: 501A

M2: Vehicular networks

Chair: Abbas Bradai (XLIM Institute, University of Poitiers, France)

Interest-Centric Vehicular Ad Hoc Network

Fab rio Gonalves (Instituto Federal de Educao, Ci ncia e Tecnologia Fluminense, Brazil); Felipe M. G. Frana (Universidade Federal do Rio de Janeiro, Brazil); Claudio L Amorim (Federal University of Rio de Janeiro, Brazil)

Ferrying Vehicular Data in Cloud Through Software Defined Networking

Prasan Kumar Sahoo and Yoppy Yunhasnawa (Chang Gung University, Taiwan)

Data age based MAC scheme for fast and reliable communication within and between platoons of vehicles

Annette B hm and Kristina Kunert (Halmstad University, Sweden)

Adaptive intermessages delay in vehicular networks

Hermes Moraes, Jr. (Universit  de Technologie de Compi gne, France); Bertrand Ducourthial (Universit  de Technologie de Compi gne & CNRS Heudiasyc UMR6599, France)

Room: 501B

W2: Performance Analysis

Chair: Ahmed Ibrahim (University of Virginia, USA)

A Multi-channel Multiple Access Scheme Using Frequency Offsets Modelling and Analysis

Sarwar Morshed, Mitra Baratchi, Pranab Mandal and Geert Heijenk (University of Twente, The Netherlands)

Spectrum Prediction using Hidden Markov Models for Industrial Cognitive Radio

Ahmad Saad (Fraunhofer Institute for Embedded Systems and Communication Technologies ESK, Germany); Barbara Staehle (HTWG Konstanz, Germany); Rudi Knorr (Fraunhofer Institute for Embedded Systems and Communication Technologies (ESK), Germany)

First-Order Statistics Analysis of Two New Geometrical Models for Non-WSSUS Mobile-to-Mobile Channels

José J. JaimeRodriguez (UASLP, Mexico); Carlos A. Gutiérrez and Daniel Ulises CamposDelgado (Universidad Autonoma de San Luis Potosi, Mexico); Jose Martin LunaRivera (Autonomous University of San Luis Potosi, Mexico)

Extended Measurement Tests of Dual Polarization Radio over Fiber and Radio over FSO Fronthaul in LTE C-RAN architecture

Jan Bohata, Petr Pesek and Stanislav Zvanovec (Czech Technical University in Prague, Czech Republic); Zabih Ghassemlooy (Northumbria University, United Kingdom)

Room: 502A

U2: Advanced Applications and Features for Mobile Services

Chair: Françoise Sailhan (CANM, France)

iRAM: Sensing Memory Needs of My Smartphone

David T. Nguyen (Facebook, USA); Hongyang Zhao, Gang Zhou and Ge Peng (College of William and Mary, USA); Guoliang Xing (Michigan State University, USA)

TrainedOnce DeviceFree Crowd Counting and Occupancy Estimation Using WiFi: A Doppler Spectrum Based Approach

Simone Di Domenico (Università di Roma Tor Vergata, Italy); Giovanni Pecoraro and Ernestina Cianca (University of Rome Tor Vergata, Italy); Mauro De Sanctis (University of Rome "Tor Vergata", Italy)

Robust Occupancy Inference with Commodity WiFi

Xiaoxuan Lu and Hongkai Wen (University of Oxford, United Kingdom); Han Zou (Nanyang Technological University, Singapore); Hao Jiang (Fuzhou University, P.R. China); Lihua Xie (Nanyang Technological University); Niki Trigoni (University of Oxford, United Kingdom)

Proactive and Reactive Carpooling Recommendation System based on Spatiotemporal and Geosocial Data

Ahmed Elbery (NTI & VT, USA); Mustafa ElNainay (Alexandria University & Virginia Tech, Egypt); Hesham Rakha (Virginia Tech, USA)

16:00 – 17:30

Room: 501A

M3: Wireless Sensor Networks

Chair: Françoise Sailhan (CANM, France)

Recharging of Wireless Sensor Network Using KMEC with Dynamic Active Zone Strategy

Sakil Chowdhury (University of Mississippi, USA)

Enabling Composite Metrics in Collection Protocols for WSNs

Camilo Rojas (CSEM Swiss Center for Electronics and Microtechnology & EPFL École Polytechnique Fédérale de Lausanne, Switzerland); Damien Piguat (Centre Suisse d'Electronique et de Microtechnique, Switzerland); JeanDominique Decotignie (CSEM & EPFL, Switzerland)

Third-party-independent Data Visualization of Sensor Data in CoMaDa

Corinna Schmitt and Tim Strasser (University of Zurich, Switzerland); Burkhard Stiller (University of Zürich & ETH Zürich, TIK, Switzerland)

Two Novel Subjective Logicbased Innetwork Data Processing Schemes in Wireless Sensor Networks

Farhad Firoozi and Frank Y. Li (University of Agder, Norway); Vladimir Zadorozhny (University of Pittsburgh, USA)

Room: 501B

W3: Resource Allocation

Chair: Valentine Aalo (Florida Atlantic University, USA)

Puzzle-based Auction Mechanism for Spectrum Sharing in Cognitive Radio Networks

Khashayar Kotobi, Philip Mainwaring and Sven Bilen (The Pennsylvania State University, USA)

Selfconfiguring Multipath IntraMesh Infrastructure QoS based Routing

Hajer Bargaoui (University of Burgundy, France); Nader Mbarek (LE2I, University of Burgundy, France); Olivier Togni (University of Burgundy, France); Mounir Frikha (High School of Communication in Tunis, Tunisia)

Improving QoS in Multioperator Cellular Networks

Rafael Kunst (Federal University of Rio Grande do Sul (UFRGS) & La Salle University (Unilasalle), Brazil); Leandro A. de Avila (Federal University of Rio Grande do Sul, Brazil); Edison Pignaton (UFRGS, Brazil); Sergio Bampi (Federal University of Rio Grande do Sul & Microelectronics Group at UFRGS, Brazil); Juergen Rochol (University Federal do Rio Grande do Sul, Brazil)

Centralized Caching in Twolayer Networks: Algorithms and Limits

Lin Zhang (University of Electronic Science and Technology of China, P.R. China); Zhao Wang (Royal Institute of Technology (KTH), Sweden); Ming Xiao (Royal Institute of Technology, Sweden); Gang Wu and Shaoqian Li (University of Electronic Science and Technology of China, P.R. China)

Room: 502A

M6: Opportunistic routing

Chair: Maurizio Casoni (University of Modena and Reggio Emilia, Italy)

Path Sampling, a Robust Alternative to Gossiping for Opportunistic Network Routing

Jorge Visca (Universidad de la República, Uruguay); Javier Baliosian (University of the Republic, Uruguay); Raul A. Fuentes (Télécom SudParis & Tecnológico de Monterrey, Campus Monterrey, France); Ana Cavalli (Telecom SudParis, France)

Towards D2Dbased Opportunistic Data Relay Service in Partial Notspots

Ganesh Chandrasekaran and Ning Wang (University of Surrey, United Kingdom); Ji Jun and Mingwei Xu (Tsinghua University, P.R. China); Rahim Tafazolli (University of Surrey, United Kingdom)

G2: Optimized Networking

Chair: Maurizio Casoni (University of Modena and Reggio Emilia, Italy)

Energy Consumption Evaluation of H.264 and HEVC Video Encoders in High-Resolution Live Streaming

Mikko Uitto (VTT Technical Research Centre of Finland, Finland)

OpenFlowEnabled User Traffic Profiling in Campus Software Defined Networks

Taimur Bakhshi and Bogdan Ghita (Plymouth University, United Kingdom)

Wednesday, October 19

09:30 – 10:30

Room: 401A, B, C

Keynote2: Coding for multi hop wireless networks

Prof. Muriel Médard, MIT

Chair: Peter Mueller (IBM Zurich Research Laboratory, Switzerland)

11:00 – 12:30

Room: 501A

M4: Traffic Management

Chair: Corinna Schmitt (University of Zurich, Switzerland)

Rate Control Scheme for Congestion Control in Wireless Body Area Networks

Richard Jaramillo (École Polytechnique de Montréal & Département de Génie Informatique et Logiciel, Canada); Alejandro Quintero and Steven Chamberland (Ecole Polytechnique de Montreal, Canada)

Feasibility of Backpressure Algorithm for Satellite Networks

Jianzhou Chen (University of Chinese Academy of Science, Institute of Software Chinese Academy of Science, P.R. China); Lixiang Liu (Institute of Software, Chinese Academy of Sciences, P.R. China); Xiaohui Hu (Institute of Software Chinese Academy of Science, P.R. China)

Flow Control and Traffic Management for a Broadband Satellite Network

Jun (Erik) Xu (Hughes Network Systems, USA)

Distributed Efficient & Fair Anticollision for RFID protocol

Abdoul Aziz Mbacke (Inria Lille Nord Europe, France); Nathalie Mitton (Inria Lille Nord Europe, France); Herve Rivano (Inria & Université de Lyon, INRIA, INSA Lyon, CITI, France)

Room: 501B

W4: Interference Management

Chair: Samuel Pierre (Ecole Polytechnique de Montreal, Canada)

A LowComplexity Matched Filter Detector with Parallel Interference Cancellation for Massive MIMO Systems

Yuto Hama and Hideki Ochiai (Yokohama National University, Japan)

Exact Distributions for Aggregate Interference in Wireless Networks with a Poisson Field of Interferers

Constantine Mukasa and Valentine Aalo (Florida Atlantic University, USA); George Efthymoglou (University of Piraeus, Greece)

NarrowBand Interference Mitigation Using Compressive Sensing in AFOFDM Systems

Hanan AlTous and Imad Barhumi (United Arab Emirates University, United Arab Emirates (UAE)); Naofal AlDhahir (University of Texas at Dallas, USA)

Room: 502A

Se1: Cloud and Mobile Security

Chair: Peter Mueller (IBM Zurich Research Laboratory, Switzerland)

Securely Outsourcing Cookies to the Cloud via Private Information Retrieval

Levon Nazaryan, Ruofan Jin and Chaoqun Yue (University of Connecticut, USA); Ozgur Oksuz (University of Connecticut, USA); Bing Wang (University of Connecticut, USA); Kyoungwon Suh (Illinois State University, USA); Aggelos Kiayias (Unv. of Connecticut, USA)

Towards AdHoc Cloud Based Approach for Mobile Intrusion Detection

Toufic Dbouk and Azzam Mourad (Lebanese American University, Lebanon); Hadi Otrouk (Khalifa University of Science, Technology & Research (KUSTAR), United Arab Emirates (UAE)); Chamseddine Talhi (École de Technologie Supérieure, Canada)

On the Malware Propagation in Heterogeneous Networks

Alexander Alexeev, Diane Henshel, Mariana Cains and Quan Sun (Indiana University, USA)

WhatsApp: Modeling Mobile Applications by Domain Names

Wei Wang (AT&T Security Research Center, USA); Jeffrey Bickford (AT&T, USA)

14:00 – 15:30

Room: 501A

M5: Performance evaluation

Chair: Imad Barhumi (United Arab Emirates University, United Arab Emirates (UAE))

Studying the Impact of LTEU on WiFi Downlink Performance

Amr Abdelfattah (Sorbonne Universites, France); Naceur Malouch (Université Pierre et Marie Curie Paris 6, France)

User-centric QoE-driven Vertical Handover Framework in Heterogeneous Wireless Networks

Li Liu (Plymouth University, United Kingdom); Lingfen Sun and Emmanuel Ifeachor (University of Plymouth, United Kingdom)

ViPMesh: A Virtual Prototyping Framework for IEEE 802.11s Wireless Mesh Networks

Michael Rethfeldt (University of Rostock & Institute of Applied Microelectronics and Computer Engineering, Germany); Hannes Raddatz, Benjamin Beichler, Björn Konieczek, Dirk Timmermann and Christian Haubelt (University of Rostock, Germany); Peter Danielis (KTH Royal Institute of Technology, Sweden)

In Depth Performance Evaluation of LTEM for M2M Communications

Samir Dawaliby (Xlim, France); Abbas Bradai (XLIM Institute, University of Poitiers, France); Yannis Pousset (Université de Poitiers, France)

Room: 501B

G1: Energy efficiency and management of complex networks

Chair: Julien Montavont (ICube Laboratory (CNRS) - University of Strasbourg, France)

Towards Optimal Power Control and Routing Algorithm in Deep Space Networks

Yang Song (University of Chinese Academy of Science, P.R. China); Lixiang Liu (Institute of Software, Chinese Academy of Sciences, P.R. China); Jianzhou Chen (University of Chinese Academy of Science, Institute of Software Chinese Academy of Science, P.R. China)

Energy-Efficient 5G Deployment in Rural Areas

Alexander Karlsson, Osama AlSaadeh, Anton Gusarov and Renuka Venkata Ramani Challa (KTH Royal Institute of Technology, Sweden); Sibel Tombaz (Ericsson Research, Sweden); Ki Won Sung (KTH Royal Institute of Technology, Sweden)

Joint Grid Energy-Throughput Optimization for Hybrid Energy Small Cell Access Points

Animesh Yadav (Memorial University of Newfoundland, Canada); Tri Nguyen (ETS, Canada); Wessam Ajib (Université du Québec à Montréal, Canada)

An intelligent storage-based energy management approach for smart grids

Joelle Klaimi (Université Libanaise, Lebanon); Rana RahimAmoud (Lebanese University, Lebanon); Leila MerghemBoulaiah (UTT, France); Akil Jrad (Lebanese University, Lebanon); Moez Esseghir (Technology University of Troyes & Charles Delaunay Institute, France)

Room: 502A

Se2: Wireless Security

Chair: Alexander Alexeev (Indiana University, USA)

Increasing BaseStation Anonymity in Wireless Sensor Networks Through Adaptive Sampling Rate

Sami Alsemairi and Mohamed Younis (University of Maryland Baltimore County, USA)

Encrypting Wireless Network Traces to Protect User Privacy: A Case Study for Smart Campus

Luqiao Zhang (Chengdu University of Information Technology, P.R. China); Ozgur Oksuz (University of Connecticut, USA); Levon Nazaryan, Chaoqun Yue and Bing Wang (University of Connecticut, USA); Aggelos Kiayias (Unv. of Connecticut, USA); Athanasios Bamis (University of Connecticut, USA)

SAriadne: A Secure Source Routing Protocol to Prevent HiddenChannel Attacks

Baban Mahmood (University of Kentucky, USA); Ahmed Ibrahim (University of Virginia, USA); D. Manivannan (University of Kentucky, USA)

Adaptive Security Mechanisms for Safety applications in Internet of Vehicles

Muhammad Awais Javed (Qatar Mobility Innovations Center, Qatar); Elyes Ben Hamida (Qatar Mobility Innovations Center (QMIC), Qatar)

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