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***GNSS Signal Acquisition in Harsh Urban Environments***

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***On the Use of Ray Tracing for Performance Prediction of UWB Indoor Localization Systems***

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Muhammad Atif Yaqoob (Lund University, Sweden); Fredrik Tufvesson (Lund University, Sweden); Anders Mannesson (Lund University, Sweden); Bo Bernhardsson (Lund University, Sweden)

***PyLayers: An Open Source Dynamic Simulator for Indoor Propagation and Localization***

Nicolas Amiot (Université Rennes I & Institut d' Electronique et de Télécommunications de Rennes, France); Mohamed Laaraiedh (University of Rennes 1, France); Bernard Uguen (University of Rennes I, France)

## ICC'13 WS - Workshop Beyond LTE-A (B-LTE-A)

### B-LTE-A-01: Plenary 1: "What is the Role of MIMO Beyond LTE: Massive? Coordinated? mmWave?"

MIMO communication exploding again - this time in the number of antennas. Massive MIMO brings hundreds of antennas at the base station serving tens of users via multiuser MIMO. Coordinated MIMO coordinates dozens of antennas at different base stations to reduce the effects of interference. mmWave MIMO uses large arrays at base station and user equipment to serve multiple users with narrow beams and lots of spectrum. This talk will explain key features of each technology and then will provide comparisons of coverage and capacity using a mathematical framework built around stochastic geometry.

Robert W. Heath Jr. received the Ph.D. in EE from Stanford University. He is currently a Professor in the Department of Electrical and Computer Engineering at The University of Texas at Austin and Director of the Wireless Networking and Communications Group. He is also the President and CEO of MIMO Wireless Inc and Chief Innovation Officer at Kuma Signals LLC.

Prof. Heath has been an Editor for the IEEE Transactions on Communication, an Associate Editor for the IEEE Transactions on Vehicular Technology, lead guest editor for an IEEE JSAC special issue on limited feedback communication, and lead guest editor for an IEEE JSTSP special issue on Heterogenous Networks. He currently serves on the steering committee for the IEEE Transactions on Wireless Communications. He was a technical co-chair for the 2007 Fall Vehicular Technology Conference, general chair of the 2008 Communication Theory Workshop, general co-chair, technical co-chair and co-organizer of the 2009 IEEE Signal Processing for Wireless Communications Workshop, local co-organizer for the 2009 IEEE CAMSAP Conference, technical co-chair for the 2010 IEEE International Symposium on Information Theory, the technical chair for the 2011 Asilomar Conference on Signals, Systems, and Computers, general chair for the 2013 Asilomar Conference on Signals, Systems, and Computers, general co-chair for the 2013 IEEE GlobalSIP conference, and is technical co-chair for the 2014 IEEE GLOBECOM conference.

Prof. Heath was a co-author of best student paper awards at IEEE VTC 2006 Spring, WPMC 2006, IEEE GLOBECOM 2006, IEEE VTC 2007 Spring, and IEEE RWS 2009, as well as co-recipient of the Grand Prize in the 2008 WinTech WinCool Demo Contest. He was co-recipient of the 2011 EURASIP Journal on Wireless Communications and Networking best paper award and the 2012 Signal Processing Magazine Best Paper award. He is the recipient of the David and Doris Lybarger Endowed Faculty Fellowship in Engineering, a licensed Amateur Radio Operator, is a registered Professional Engineer in Texas, and is a Fellow of the IEEE.

### B-LTE-A-02: Future M2M and D2D Communications

#### ***Data-Centric Clustering for Data Gathering in Machine-to-Machine Wireless Networks***

Tzu-Chuan Juan (National Taiwan University, Taiwan); Shih-En Wei (National Taiwan University, Taiwan); Hung-Yun Hsieh (National Taiwan University, Taiwan)  
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#### ***Predictive Resource Allocation in the LTE Uplink for Event Based M2M Applications***

Jason Brown (University of Newcastle, Australia); Jamil Y Khan (The University of Newcastle, Australia)  
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#### ***QoS-Aware Mode Selection and Resource Allocation Scheme for Device-to-Device (D2D) Communication in cellular networks***

Si Wen (Beijing University of Posts and Telecommunication, P.R. China); Xiaoyue Zhu (BUPT, P.R. China); Xin Zhang (Beijing University of Posts and Telecommunications, P.R. China); Dacheng Yang (Beijing University of Posts and Telecommunications, P.R. China)  
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### B-LTE-A-03: Enhanced Multi-Antenna Transmission

#### ***Investigation on Elevation Beamforming for Future LTE-Advanced***

Yang Song (DOCOMO Beijing Communications Laboratories Co., Ltd., P.R. China); Xiang Yun (DOCOMO Beijing Communications Laboratories Co., Ltd., P.R. China); Satoshi Nagata (NTT DoCoMo, Inc., Japan); Lan Chen (DOCOMO Beijing Communication Laboratories Co., Ltd, P.R. China)  
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### ***Evolution Beyond LTE-Advanced with Full Dimension MIMO***

Younsun Kim (Samsung Electronics Co., Ltd., Korea); Hyoungju Ji (Samsung Electronics. Co., Ltd, Korea); Hyo-Jin Lee (Samsung, Korea); Juho Lee (Samsung Electronics. Co., Ltd, Korea); Boon Loong Ng (Samsung Telecommunications America, USA); Jianzhong Zhang (Samsung Telecommunications America, USA)  
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Gencer Cili (Apple Inc. & Carleton University, USA); Halim Yanikomeroglu (Carleton University, Canada); F. Richard Yu (Carleton University, Canada)  
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Marc Torrellas (Technical University of Catalonia, Spain); Adrian Agustin (Universitat Politècnica de Catalunya (UPC), Spain); Josep Vidal (Universitat Politècnica de Catalunya, Spain)  
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### ***Antenna Combiners for Block-Diagonalization based Multi-User MIMO with Limited Feedback***

Stefan Schwarz (Vienna University of Technology, Austria); Markus Rupp (Vienna University of Technology, Austria)  
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## **B-LTE-A-04: Plenary 2: Wireless communication of the future**

LTE is rapidly emerging as the long-term radio-access technology-of-choice for mobile broadband. The first major step of the evolution of LTE, sometimes also referred to as LTE-A or LTE-Advanced, was taken as part of 3GPP release 10. However, the demands on mobile broadband, in terms of traffic volume and service capabilities are continuously increasing. Also, new applications and use cases, such as extensive "machine-communication", is expected to emerge. In order to respond to these demands in a cost-efficient and sustainable way, LTE needs to evolve further. Also, new radio-access technologies may need to be developed in order to address specific scenarios and use cases. This presentation will discuss the possible future paths for wireless communication, including both a continuous evolution of LTE and possible new radio-access technologies, in order to meet the challenges of the future.

Bio: Erik Dahlman received the Master of Science degree and Doctor of Technology degree from the Royal Institute of Technology, Stockholm in 1987 and 1992 respectively. He is currently the Senior Expert in Radio Access Technologies within Ericsson Research. Erik Dahlman was deeply involved in the development and standardization of 3G radio access technologies (WCDMA and HSPA), first in Japan and later within the global 3GPP standardization body. More recently he has been involved in the standardization/development of the 3GPP Long Term Evolution (LTE) and its continued evolution. He is currently part of the Ericsson Research management team working with long-term strategies in the area of radio-access technologies. Erik Dahlman is the co-author of the book 3G Evolution - HSPA and LTE for Mobile Broadband and its follow-up 4G - LTE and LTE-Advanced for mobile broadband. He has also participated in three other books within the area of radio communication, as well as numerous journal papers and conference contributions. In 1998 he received the IEEE Jack Neubauer Best System Paper award for the paper WCDMA - The Radio Interface for Future Mobile Multimedia. Erik Dahlman holds more than 80 patents in the area of mobile-radio communication and has been named the Inventor of The Year within Ericsson. In October 2009, Erik Dahlman received the Major Technical Award, an award handed out by the Swedish Government, for his contributions to the technical and commercial success of the HSPA radio-access technology.

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Hyounghu Ji (Samsung Electronics. Co., Ltd, Korea); Younsun Kim (Samsung Electronics Co., Ltd., Korea); Seunghoon Choi (Samsung Electronics. Co., Ltd, Korea); Joonyoung Cho (Samsung Electronics Co., Ltd., Korea); Juho Lee (Samsung Electronics. Co., Ltd, Korea)  
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### ***Distributed Resource Allocation for D2D Communication Underlying Cellular Networks***

Rui Yin (Zhe Jiang University, P.R. China); Guanding Yu (Zhejiang University, P.R. China); Caijun Zhong (Zhejiang University, P.R. China); Zhaoyang Zhang (Zhejiang University, P.R. China)  
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### ***Design Requirements of Adaptive Pilot-Symbol Patterns***

Michal Simko (Vienna University of Technology, Austria); Paulo Diniz (Universidade Federal do Rio de Janeiro, Brazil); Markus Rupp (Vienna University of Technology, Austria)  
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Rasmus Brandt (KTH Royal Institute of Technology, Sweden); Per Zetterberg (KTH Royal Institute of Technology, Sweden); Mats Bengtsson (KTH Royal Institute of Technology, Sweden)  
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Huiqin Du (University of Edinburgh, United Kingdom); Tharmalingam Ratnarajah (The University of Edinburgh, United Kingdom); Mathini Sellathurai (Heriot-Watt University, United Kingdom); Constantinos B. Papadias (Athens Information Technology, Greece)  
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### ***A Comparative Study of Interference Alignment Schemes with LTE-Compliant Turbo Coding***

Stylios Papaharalabos (Athens Information Technology, Greece); George C. Alexandropoulos (Athens Information Technology, Greece); Constantinos B. Papadias (Athens Information Technology, Greece)  
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### ***Interference-aware MIMO precoder design with realistic power constraints***

Felipe Llinares-López (Universidad Carlos III de Madrid, Spain); Matilde Sánchez-Fernández (Universidad Carlos III de Madrid, Spain); Emilio Parrado-Hernandez (Universidad Carlos III de Madrid, Spain); Ana Garcia Armada (Universidad Carlos III de Madrid, Spain)  
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Sangkyu Park (Seoul National University, Korea); Chan-Byoung Chae (Yonsei University, Korea); Saewoong Bahk (Seoul National University, Korea)  
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# ICC'13 WS - Workshop on Beyond Social Networks: Collective Awareness (BSN-CA)

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Charles Perez (University of Technology of Troyes, France); Marc Lemerrier (University of Technology of Troyes, France); Babiga Birregah (University of Technology of Troyes, France)  
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### ***Contact Probability based Routing Protocol for Mobile Social Networks***

Bo Fan (University of Electronic Science and Technology of China, P.R. China); Supeng Leng (University of Electronic Science and Technology of China, P.R. China)  
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### ***An Architecture for Collecting Longitudinal Social Data***

Jeremy Blackburn (University of South Florida, USA); Adriana I. Iamnitchi (University of South Florida, USA)  
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### ***Sensors talk and humans sense towards a reciprocal collective awareness smart city framework***

Athena Vakali (Aristotle University of Thessaloniki, Greece); Lefteris Angelis (Aristotle University of Thessaloniki, Greece); Maria Giatsoglou (Aristotle University of Thessaloniki, Greece)  
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### ***Collective Awareness and Action in Urban Superorganisms***

Nicola Bicchieri (University of Modena and Reggio Emilia, Italy); Damiano Fontana (University of Modena and Reggio Emilia, Italy); Marco Mamei (Università di Modena e Reggio Emilia, Italy); Franco Zambonelli (University of Modena and Reggio Emilia, Italy)  
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### ***Measuring Net Neutrality in Mobile Internet: Towards a Crowdsensing-based Citizen Observatory***

Daniele Miorandi (Create-Net, Italy); Iacopo Carreras (Create-Net, Italy); Enrico Gregori (CNR-IIT, Italy); Ian Graham (University of Edinburgh, United Kingdom); James Stewart (University of Edinburgh, United Kingdom)  
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### ***Out of the Wild: On Generating Default Policies in Social Ecosystems***

Imrul Kayes (University of South Florida, USA); Adriana I. Iamnitchi (University of South Florida, USA)  
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### ***Collective spatial awareness***

Gualtiero Colombo (University of Cardiff, United Kingdom); Stuart Allen (University of Cardiff, United Kingdom); Martin J Chorley (Cardiff University, United Kingdom); Vlad Tanasescu (Cardiff University, United Kingdom); Roger Whitaker (University of Cardiff, United Kingdom); Chris Jones (Cardiff University, United Kingdom)  
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### ***IPR Management Models for Cultural Heritage on ECLAP Best Practice Network***

Paolo Nesi (DSI, University of Florence, Italy); Pierfrancesco Bellini (University of Florence, Italy); Michela Paolucci (Unifi, Italy)  
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### ***Speeding up the transition to collective awareness***

Luce Jacovella (University of London, United Kingdom); Pietro Lio (University of Cambridge, United Kingdom)  
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# ICC'13 WS - Workshop on Cloud, Networks and Data Centers (CNDC)

**Welcome (Marco Hoffmann, NSN)**

**Key Note (Boas Betzler, IBM)**

## **CNDC-01: SDN**

### ***Software-Defined Infrastructure and the Future Central Office***

Joon-Myung Kang (University of Toronto, Canada); Hadi Bannazadeh (University of Toronto, Canada); Hesam Rahimi (University of Toronto, Canada); Thomas Lin (University of Toronto, Canada); Mohammad Faraji (University of Toronto, Canada); Alberto Leon-Garcia (University of Toronto, Canada)  
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### ***FSDM: Floodless Service Discovery Model based on Software-Defined Network***

Wang Jian (BUPT, P.R. China); Zhao Weichen (Beijing University of Posts and Telecommunications, P.R. China); Yang Shouren (Beijing University of Posts and Telecommunications, P.R. China); Liu Jiang (Beijing University of Posts and Telecommunications, P.R. China); Huang Tao (Beijing University of Post and Telecommunication, P.R. China); Liu Yunjie (China Unicom, P.R. China)  
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### ***Dynamic, software-defined service provider network infrastructure***

Casimer DeCusatis (IBM Corporation, USA); Michael Haley (IBM, USA); Todd Bundy (ADVA Optical Networking, USA); Robert Cannistra (Marist College, USA); Ryan Wallner (Marist College, USA); Jason Parrage (Marist College, USA); Ryan Flaherty (Marist College, USA)  
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## **CNDC-02: Virtualization / Clouds**

### ***Shared Protection in Virtual Networks***

Isil B. Barla (Technical University of Munich & Nokia Siemens Networks Germany, Germany); Klaus Hoffmann (Nokia Siemens Networks GmbH & Co. KG, Germany); Marco Hoffmann (Nokia Siemens Networks GmbH & Co. KG, Germany); Dominic A. Schupke (Nokia Siemens Networks & NSN Research, Germany); Georg Carle (Technische Universität München, Germany)  
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### ***A Novel Method of Virtual Network Embedding Based on Topology Convergence-Degree***

Hongyan Cui (Beijing University of Posts and Telecommunications, P.R. China); Shaohua Tang (Beijing University of Posts and Telecommunications, P.R. China); Xu Huang (University of Canberra, Australia); Jian-ya Chen (Beijing University of Posts and Telecommunications, P.R. China); Yunjie Liu (Beijing University of Posts and Telecommunications, P.R. China)  
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### ***NSN Mobile Core Network Elements in Cloud***

Gergely Csatóri (Nokia Siemens Networks, Hungary); Tímea László (Nokia Siemens Networks, Hungary)  
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### ***Elasticity as a service for federated cloud testbeds***

Giuseppe Carella (Technische Universität Berlin, Germany); Florian Schreiner (Fraunhofer Institut FOKUS, Germany); Konrad Campowsky (Fraunhofer FOKUS, Germany); Thomas Magedanz (TU Berlin / Fraunhofer FOKUS, Germany)  
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**Summary (Glen Hunt, Current Analysis)**



# ICC'13 WS - Fifth Workshop on Cooperative and Cognitive Networks (CoCoNet5)

## CoCoNet: Keynote

Key physical layer challenges for cognitive communications are sensing and communications. Within the sensing procedure the radio channel must be observed to find possible primary users, or to carrier sense other cognitive radios which are using the wireless resource. To ensure best performance, the ROC (receiver operating characteristic) of different sensing approaches gives best insight. It, however, very much depends on the sensing approach taken. Recent results show that major sensing improvements over standard OFDM can be obtained by using new capturing methods, based on GFDM (generalized frequency division multiplexing). For the cognitive radio communications to be allowed to communication the communications waveform and modulation must provide a very small out-of-band power radiation. This way primary users are not obstructed, or other secondary users can be densely packed within the band of cognitive operation. Also, the waveform and modulation chosen should have bandwidth scalability and should allow for spectrum aggregation. Hence, multi-carrier systems are a natural choice, i.e. OFDM, FBMC, or GFDM. A comparison shows the overwhelming benefits that can be achieved with GFDM, at a small cost in complexity.

## CoCoNet-01: Cognition and Network Coding

### ***A Software Radio Implementation for Spectrum Hole Sensing in Cognitive Mobile Networks***

Elena Guzzon (University of Roma Tre, Italy); Francesco Benedetto (University of Roma Tre & Signal Processing for Telecommunications and Economics Lab., Italy); Gaetano Giunta (University of "Roma TRE" & Laboratory of Signal Processing for Telecommunications and Economics, Italy); Markku K. Renfors (Tampere University of Technology, Finland)  
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### ***Physical Layer Network Coding: A Cautionary Story with Interference and Spatial Reservation***

Hironori Fukui (Kansai University, Japan); Hiroyuki Yomo (Kansai University & Aalborg University, Japan); Petar Popovski (Aalborg University, Denmark)  
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## CoCoNet-02: Cooperative Networking

### ***Research of Synchronization and Training Sequence Design for Cooperative D2D Communications Underlying Hyper-Cellular Networks***

Yanxiang Jiang (Southeast University, P.R. China); Xiaohu You (Southeast University, P.R. China)  
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### ***Opportunistic Cooperative Routing in Multi-Radio Multi-Channel Wireless Sensor Networks***

J. R. Wen (BUPT, P.R. China); Muqing Wu (BUPT, P.R. China); Bo Lv (BUPT, P.R. China); Wang Dongyang (BUPT, P.R. China)  
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### ***Mobile Node Localization Using Cooperation and Static Beacons***

Troy Johnson (Central Michigan University, USA); Patrick Seeling (Central Michigan University, USA)  
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### ***Social Video Consumption: Synchronized Viewing Experiences across Devices and Networks***

Marie-Jose Montpetit (MIT Media Laboratory, USA); Henry Holtzman (MIT Media Lab, USA); Kanti Chakrabarti (QFactor Communications, USA); Maja Matijasevic (University of Zagreb, Croatia)  
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### ***Distributed Robust Sum Rate Maximization in Cooperative Cellular Networks***

Richard Fritzsche (Technische Universität Dresden, Germany); Gerhard Fettweis (Technische Universität Dresden, Germany)  
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### ***Performance analysis of amplify-and-forward MIMO-OFDM links with linear ZF equalization***

Donatella Darsena (University of Napoli Parthenope, Italy); Giacinto Gelli (University of Napoli - Federico II, Italy); Fulvio Melito (University of Napoli Federico II, Italy); Francesco Verde

(University of Napoli Federico II & National Laboratory for Multimedia Communications of National Inter-University Consortium for Teleco, Italy)  
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**Analyzing computation offloading energy-efficiency measurements**

Krisztián Fekete (Budapest University of Technology and Economics, Hungary); Kristóf Csorba (Budapest University of Technology and Economics, Hungary); Bertalan Forstner (Budapest University of Technology and Economics, Hungary); Tamás Vajk (Budapest University of Technology and Economics, Hungary); Marcell Fehér (Budapest University of Technology and Economics, Hungary); István Albert (Budapest University of Technology and Economics, Hungary)  
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## CoCoNet-03: Network Coding & Cognitive Radio

**On the Need of Novel Medium Access Control Schemes for Network Coding enabled Wireless Mesh Networks**

Achuthan Paramanathan (Aalborg University, Denmark); Peyman Pahlavani (APNET, Denmark); Daniel E. Lucani (Aalborg University, Denmark); Frank H.P. Fitzek (Aalborg University, Denmark)  
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**Improving Reliability in Lossy Wireless Networks Using Network Coding**

Li Ma (University of Sydney, Australia); Zihuai Lin (University of Sydney, Australia); Zijie Zhang (NICTA, Australia); Guoqiang Mao (The University of Sydney, Australia); Branka Vucetic (The University of Sydney, Australia)  
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**Wireless Network Coding Throughput Dependence on Node Locations**

Hong Li (Huawei Technologies Sweden AB, Sweden); Henrik Lundqvist (Huawei Technologies, Sweden); Georgios P. Koudouridis (Huawei Technologies Sweden R&D Center & Royal Institute of Technology, Sweden)  
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**Outage Analysis of Coded Cooperation with Multiple Relays and Nakagami-m Fading**

Prabhat Kumar Sharma (Netaji Subhas Institute of Technology, New Delhi, India); Parul Garg (Netaji Subhas Institute of Technology, New Delhi, India)  
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**A Low Complexity Algorithm for Multiple Relay Selection in Two-Way Relaying Cognitive Radio Networks**

Ahmad Alsharoa (King Abdullah University of Science and Technology (KAUST), Saudi Arabia); Hakim Ghazzai (King Abdullah University of Science and Technology (KAUST) & KAUST, Saudi Arabia); Mohamed-Slim Alouini (King Abdullah University of Science and Technology (KAUST), Saudi Arabia)  
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**Robust Utility Scheme with Admission Control over MIMO Cognitive Radio Network**

Huiqin Du (University of Edinburgh, United Kingdom); Tharmalingam Ratnarajah (The University of Edinburgh, United Kingdom)  
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**A Performance Trade-off in Wideband Cognitive Radio for Flexible Wireless Systems**

JeongHun Park (Yonsei University, Korea); Chan-Byoung Chae (Yonsei University, Korea); Dong Ku Kim (Yonsei University, Korea)  
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## CoCoNet-04: Cognitive Networks

**Detection of Collaborative SSDF Attacks using Abnormality Detection Algorithm in Cognitive Radio Networks**

Mingchen Wang (University of Science and Technology of China, P.R. China); Bin Liu (University of Science and Technology of China, P.R. China); Chi Zhang (University of Science of Technology of China, P.R. China)  
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***Geo-location Assisted Spectrum Sensing for Cognitive Coexistent Heterogeneous Networks***

Bingxuan Zhao (Niigata University, Japan); Shigenobu Sasaki (Niigata University, Japan)  
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***Proactive Channel Gain Estimation in Asymmetric TDD Primary Systems***

Guodong Zhao (The Hong Kong University of Science and Technology, Hong Kong); Lin Zhang (University of Electronic Science and Technology of China, P.R. China); Liying Li (University of Electronic Science and Technology of China, P.R. China); Gang Wu (University of Electronic Science and Technology of China, P.R. China)  
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***Network-Aware Retransmission Strategy Selection in Ad Hoc Wireless Networks***

Federico Librino (IIT-CNR, Italy); Giorgio Quer (University of California San Diego, USA); Michele Zorzi (University of Padova, Italy)  
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***The Cognitive Radio in TV White Space with Coexistence Constraint***

Pin-Hsun Lin (National Institute of Information and Communications Technology, Japan); Zhou Lan (National Institute of Information and Communications Technology, Japan); Gabriel Villardi (National Institute of Information and Communications Technology (NICT), Japan); Hiroshi Harada (National Institute of Information & Communications Technology (NICT), Japan)  
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***Cognitive Users with Useful Vacations***

Boris Oklander (Imperial College London, United Kingdom); Erol Gelenbe (Imperial College London, United Kingdom)  
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***Statistical Analysis of Secondary Users Throughput for OFDMA Cognitive Radio Networks***

Nariman Rahimian (Texas A&M University, USA); Costas N Georghiades (Texas A&M University, USA); Muhammad Zeeshan Shakir (Texas A&M University at Qatar (TAMUQ), USA); Khalid A. Qaraqe (Texas A&M University at Qatar, USA)  
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***Outage and SER Performance of Spectrum Sharing System with TAS/MRC***

Fahd Ahmed Khan (King Abdullah University of Science and Technology, Saudi Arabia); Kamel Tourki (Texas A&M University at Qatar, Qatar); Mohamed-Slim Alouini (King Abdullah University of Science and Technology (KAUST), Saudi Arabia); Khalid A. Qaraqe (Texas A&M University at Qatar, USA)  
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# ICC'13 WS - Workshop on Energy Efficiency in Wireless Networks and Wireless Networks for Energy Efficiency (E2Nets)

## E2Nets-01: Welcome and Keynote Talk

## E2Nets-02: Applications and Cellular

### ***Residential Demand Response with Power Adjustable and Unadjustable Appliances in Smart Grid***

Guodong Zhao (The Hong Kong University of Science and Technology, Hong Kong); Liying Li (University of Electronic Science and Technology of China, P.R. China); Jun Zhang (The Hong Kong University of Science and Technology, Hong Kong); Khaled B. Letaief (The Hong Kong University of Science and Technology, Hong Kong)  
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### ***Energy-Efficient Resource Allocation for Downlink OFDMA Systems***

Zhengguang Zheng (University of Electronic Science and Technology of China, P.R. China); Lilin Dan (University of Electronic Science and Technology of China, P.R. China); Saidan Gong (University of Electronic Science and Technology of China, P.R. China); Shaoqian Li (University of Electronic Science and Technology of China, P.R. China)  
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### ***Energy Consumption Tradeoff Between Network and User Equipment in Small Cell Networks***

Yuhuan Jiang (Zhejiang University, P.R. China); Guanding Yu (Zhejiang University, P.R. China); Jinsong Wu (Bell Laboratories & Alcatel-Lucent, P.R. China); Rui Yin (Zhe Jiang University, P.R. China)  
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## E2Nets-P1: Poster Session

### ***Efficient Power Allocation for Fixed-Gain Amplify-and-Forward Relaying in Rayleigh Fading***

Ammar Zafar (King Abdullah University of Science and Technology (KAUST), Saudi Arabia); Redha M Radaydeh (Alfaisal University, Saudi Arabia); Yunfei Chen (University of Warwick, United Kingdom); Mohamed-Slim Alouini (King Abdullah University of Science and Technology (KAUST), Saudi Arabia)  
pp. 402-406

### ***Sustainable Medium Access Control: Implementation and Evaluation of ODMAC***

Xenofon Fafoutis (Technical University of Denmark, Denmark); Alessio Di Mauro (Technical University of Denmark, Denmark); Nicola Dragoni (Technical University of Denmark, Denmark)  
pp. 407-412

### ***A Heuristic Energy Efficient Scheduling Scheme for VoIP in 3GPP LTE Networks***

Mohammad Reza Sabagh (University of Surrey, United Kingdom); Mehrdad Dianati (University of Surrey, United Kingdom); Muhammad Ali Imran (University of Surrey, United Kingdom); Rahim Tafazolli (University of Surrey, United Kingdom)  
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### ***Energy-Aware Clustering for Multi-Cell Joint Transmission in LTE Networks***

Efstathios Katranaras (University of Surrey & FEPS, United Kingdom); Muhammad Ali Imran (University of Surrey, United Kingdom); Mehrdad Dianati (University of Surrey, United Kingdom)  
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### ***Energy Efficiency Optimization For Two-way Relay Channels***

Li Fang (University of Science and Technology of China, P.R. China); Jie Xu (National University of Singapore & University of Science and Technology of China, Singapore); Ling Qiu (PCN&SS Lab, P.R. China)  
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**Limited Channel Feedback for Coordinated Beamforming under SINR Requirements**

Seongjin Kim (KAIST, Korea); Deokki Kim (KAIST, Korea); Yong H. Lee (KAIST, Korea)  
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**Analysis of CAPEX and OPEX Benefits of Wireless Access Virtualization**

Mohammad-Moshiur Rahman (École de Technologie Supérieure, University of Quebec, Canada);  
Charles Despains (Prompt, Canada); Sofiene Affes (INRS-EMT, Canada)  
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## E2Nets-02: PHY and MAC

**Q-PASTE: A Cross-Layer Power Saving Solution for Wireless Data Transmission**

Yang Song (Dublin City University, Ireland); Bogdan Ciubotaru (Dublin City University, Ireland);  
Gabriel-Miro Muntean (Dublin City University, Ireland)  
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**A Small World-based Energy-efficient Mechanism in Wireless Ad Hoc Networks**

Wang Dongyang (BUPT, P.R. China); Muqing Wu (BUPT, P.R. China); Bo Lv (Beijing University of  
Posts and Telecommunications, P.R. China); Jingrong Wen (Beijing University of Posts and  
Telecommunications, P.R. China)  
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**Adaptive Energy Efficient Communications for Rapidly Deployable Aerial-Terrestrial Networks**

Karina Mabell Gomez (Create-Net & The University of Trento, Italy); Sithamparanathan Kandeepan  
(RMIT University, Australia); Laurent Reynaud (Orange Labs, France); Tinku Rasheed (Create-Net  
Research, Italy)  
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**Supportive Relay with Heterogeneous Transceivers: Quantification of Energy Efficiency Improvement**

Goran Dimić (University of Belgrade & Institut Mihajlo Pupin, Serbia); Nikola Zogović (University of  
Belgrade & Institute Mihajlo Pupin, Serbia); Dragana D. Bajić (University of Novi Sad, Serbia)  
pp. 458-462

## E2Nets-04: Routing and More

**Optimal Random Multiaccess in Energy Harvesting Wireless Sensor Networks**

Nicolò Michelusi (University of Southern California, USA); Michele Zorzi (University of Padova, Italy)  
pp. 463-468

**An Energy Efficiency Heuristic Algorithm for Joint Optimization in Cognitive Radio Networks**

Ying-lei Teng (Beijing University of Posts and Telecommunications, P.R. China); Haoman Xu  
(Beijing University of Posts and Telecommunications, P.R. China)  
pp. 469-473

**Energy efficient M2M communications for aerospace monitoring applications**

Florian Perget (LAAS-CNRS, University of Toulouse, France); Daniela Dragomirescu (LAAS-CNRS,  
University of Toulouse & University of Toulouse, France)  
pp. 474-478

**Cooperative Multicast Transmission Strategy for Energy-Efficient Dynamic Network Coding**

Guoyan Zhang (Beijing University of Posts and Telecommunications, P.R. China); Yonghua Li  
(Beijing University of Posts and Telecommunications, P.R. China)  
pp. 479-483

# ICC'13 WS - Workshop on Emerging Vehicular Networks: V2V/V2I and Railroad Communications (EVN)

## EVN-01: Algorithms and Models

### ***Clustering in Urban environments: Virtual forces applied to vehicles***

Leandros A. Maglaras (University of Thessaly, Greece); Dimitrios Katsaros (University of Thessaly, Greece)  
pp. 484-488

### ***A Trajectory-Based Approach to Improve Delivery in Drive-Thru Internet Scenarios***

Vitor Borges Coutinho da Silva (UFRJ, Brazil); Fábio Oliveira Baptista da Silva (UFRJ, Brazil); Miguel Elias Mitre Campista (Federal University of Rio de Janeiro & GTA, Brazil); Luis Henrique M. K. Costa (Federal University of Rio de Janeiro, Brazil)  
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### ***Joint MAC Network Layer Broadcast Protocol for Vehicular Ad Hoc Networks***

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)  
pp. 495-499

### ***Limited feedback precoding performance analysis for train-to-wayside communications in subway tunnels***

Jean-Marc Kwadjane (Univ Lille Nord de France & IFSTTAR, LEOST, France); Baptiste Vrigneau (IRISA University of Rennes 1 & INRIA/IRISA CAIRN, France); Yann Cocheril (IFSTTAR, France); Charlotte Langlais (Télécom Bretagne, France); Marion Berbineau (IFSTTAR, LEOST & University Lille Nord de France, France)  
pp. 500-504

## EVN-02: Measurements and Trials

### ***Video transmission over IEEE 802.11p: real-world measurements***

Alexey Vinel (Tampere University of Technology, Finland); Evgeny Belyaev (Tampere University of Technology, Finland); Olivier Lamotte (HSR Rapperswil, Switzerland); Moncef Gabbouj (Tampere University of Technology & Tampere, Finland, Finland); Yevgeni Koucheryavy (Tampere University of Technology, Finland); Karen Egiazarian (Tampere University of Technology, Finland)  
pp. 505-509

### ***Implementation and Test of a DSRC Prototype on OpenAirInterface SDR Platform***

Philippe Agostini (Thales Communications and Security, France); Raymond Knopp (Institut Eurecom, France); Jérôme Härrı (EURECOM, France); Nathalie Haziza (Thales Communications & Security, France)  
pp. 510-514

### ***Vehicle-to-Vehicle and Vehicle-to-Roadside Multi-Hop Communications for Vehicular Sensor Networks: Simulations and Field Trial***

Alessandro Bazzi (WiLab, IEIIT-BO/CNR, University of Bologna, Italy); Barbara M Masini (IEIIT-CNR & University of Bologna, Italy); Alberto Zanella (Istituto di Elettronica e di Ingegneria dell'Inform. e delle Telecomunicazioni, Italy); Gianni Pasolini (University of Bologna, Italy)  
pp. 515-520

## EVN-03: Applications

### ***Effective Implementation of Location Services for VANETs in Hybrid Network Infrastructures***

Konstantinos Katsaros (University of Surrey, United Kingdom); Mehrdad Dianati (University of Surrey, United Kingdom); Long Le (NEC Laboratories Europe, Germany)  
pp. 521-525

***Modeling the Impact of VANET-Enabled Traffic Lights Control on the Response Time of Emergency Vehicles in Realistic Large-Scale Urban Area***

Hamed Noori (Tampere University of Technology, Finland)

pp. 526-531

***Design and Analysis of a Transport-Level Solution for Content-Centric VANETs***

Marica Amadeo (University Mediterranea of Reggio Calabria, Italy); Claudia Campolo (University "Mediterranea" of Reggio Calabria, Italy); Antonella Molinaro (University Mediterranea of Reggio Calabria, Italy)

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# Workshop on Green Broadband access: energy efficient wireless and wired network solutions (GBA)

## Workshop introduction

A few words from the Chiars

## GBA-01: Energy efficient wired network solutions

### ***Green and fast DSL via joint processing of multiple lines and time-frequency packed modulation***

Stefano Buzzi (University of Cassino and Lazio Meridionale, Italy); Chiara Risi (University of Cassino and Lazio Meridionale, Italy); Giulio Colavolpe (University of Parma, Italy)  
pp. 538-542

### ***A Comparison of Sleep Mode Mechanisms for PtP and TDM-PONs***

Jie Li (Centre for Energy-efficient Telecommunications (CEET), The University of Melbourne, Australia); Ka Lun Lee (University of Melbourne, Australia); Nga Dinh (Bell Labs Seoul, Korea); Chien Aun Chan (Centre for Energy-Efficient Telecommunications (CEET) & The University of Melbourne, Australia); Peter Vetter (Alcatel-Lucent, USA)  
pp. 543-547

### ***Framework for Evaluating Energy Efficiency of Access Networks***

Slavisa Aleksic (Vienna University of Technology, Austria); Gerald Franzl (Vienna University of Technology, Austria); Thomas Bogner (Austrian Energy Agency, Austria); Oskar Mair (Austrian Energy Agency, Austria)  
pp. 548-553

## GBA-P1: Pitch to the audience the idea presented in your poster

### ***Energy-aware network planning for non-contiguous frequency bands based cellular networks***

Shengsen Wang (Beijing University of Posts and Telecommunications, P.R. China); Feng Chunyan (Beijing University of Posts and Telecommunications, P.R. China); Caili Guo (Beijing University of Posts and Telecommunications, P.R. China); Guoxiang Wang (Beijing University of Posts and Telecommunications, P.R. China)  
pp. 554-559

### ***A Traffic Prediction Based Sleeping Mechanism with Low Complexity in Femtocell Networks***

Guoxiang Wang (Beijing University of Posts and Telecommunications, P.R. China); Caili Guo (Beijing University of Posts and Telecommunications, P.R. China); Shengsen Wang (Beijing University of Posts and Telecommunications, P.R. China); Feng Chunyan (Beijing University of Posts and Telecommunications, P.R. China)  
pp. 560-565

### ***Measurement Study of Adjacent Channel Interference in Mobile WLANs***

Ayaka Moriuchi (Ochanomizu University, Japan); Tutomu Murase (NEC Corporation, Japan); Masato Oguchi (Ochanomizu University, Japan); Akash Baid (WINLAB, Rutgers University, USA); Shweta Sagari (WINLAB, Rutgers University, USA); Ivan Seskar (WINLAB, Rutgers University, USA); Dipankar Raychaudhuri (Rutgers University, USA)  
pp. 566-570

### ***Energy-Efficient Resource Optimization in Spectrum Sharing Two-Tier Femtocell Networks***

Zhicai Zhang (Beijing University of Posts and Telecommunications, P.R. China); Haijun Zhang (Beijing University of Chemical Technology, P.R. China); Hui Liu (Beijing University of Posts and Telecommunications, P.R. China); Wenpeng Jing (Beijing University of Posts and Telecommunications, P.R. China); Xiangming Wen (Beijing University of Posts and Telecommunications, P.R. China)  
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***Energy Efficient Cluster-Based Resource Allocation and Topology Management for Beyond Next Generation Mobile Broadband Networks***

Abimbola Fisusi (Communication Research Group, Department of Electronics, University of York, United Kingdom); David Grace (University of York, United Kingdom); Paul Mitchell (University of York, United Kingdom)  
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***Optimized packet size for energy efficient cooperative wireless ad-hoc networks***

Salah Abdulhadi (Ryerson University, Canada); Muhammad Naeem (Ryerson University, Canada); Muhammad Jaseemuddin (Ryerson University, Canada); Alagan Anpalagan (Ryerson University, Canada)  
pp. 581-585

## Coffee Break

## GBA-P2: Poster Session

***Energy-aware network planning for non-contiguous frequency bands based cellular networks***

Shengsen Wang (Beijing University of Posts and Telecommunications, P.R. China); Feng Chunyan (Beijing University of Posts and Telecommunications, P.R. China); Caili Guo (Beijing University of Posts and Telecommunications, P.R. China); Guoxiang Wang (Beijing University of Posts and Telecommunications, P.R. China)  
pp. 554-559

***A Traffic Prediction Based Sleeping Mechanism with Low Complexity in Femtocell Networks***

Guoxiang Wang (Beijing University of Posts and Telecommunications, P.R. China); Caili Guo (Beijing University of Posts and Telecommunications, P.R. China); Shengsen Wang (Beijing University of Posts and Telecommunications, P.R. China); Feng Chunyan (Beijing University of Posts and Telecommunications, P.R. China)  
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***Measurement Study of Adjacent Channel Interference in Mobile WLANs***

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***Energy-Efficient Resource Optimization in Spectrum Sharing Two-Tier Femtocell Networks***

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***Energy Efficient Cluster-Based Resource Allocation and Topology Management for Beyond Next Generation Mobile Broadband Networks***

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Salah Abdulhadi (Ryerson University, Canada); Muhammad Naeem (Ryerson University, Canada); Muhammad Jaseemuddin (Ryerson University, Canada); Alagan Anpalagan (Ryerson University, Canada)  
pp. 581-585

## GBA-02: Energy efficient wireless network solutions

### ***Optimum Transmission Policies for Energy Harvesting Two-way Relay Channels***

Kaya Tutuncuoglu (The Pennsylvania State University, USA); Burak Varan (The Pennsylvania State University, USA); Aylin Yener (Pennsylvania State University, USA)  
pp. 586-590

### ***Transmission Strategies for Joint Wireless Information and Energy Transfer in a Two-User MIMO Interference Channel***

Jaehyun Park (Electronics and Telecommunications Research Institute, Korea); Bruno Clerckx (Imperial College London, United Kingdom)  
pp. 591-595

### ***Towards Zero Grid Electricity Networking: Powering BSs with Renewable Energy Sources***

Marco G Ajmone Marsan (Politecnico di Torino & IMDEA Networks, Italy); Giuseppina Bucalo (Politecnico di Torino, Italy); Alfonso di Caro (Politecnico di Torino, Italy); Michela Meo (Politecnico di Torino, Italy); Yi Zhang (Politecnico di Torino, Italy)  
pp. 596-601

### ***Practical energy-saving in 3G femtocells***

Ivaylo Haratcherev (Alcatel-Lucent Bell Labs France, France); Alberto Conte (Alcatel-Lucent & Bell Labs France, France)  
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# ICC'13 WS - Workshop on Immersive and Interactive Multimedia Communications over the Future Internet (IIMC)

## IIMC-01: 3D Video Transmission

### ***Network Coding For Error Resilient Transmission of Stereoscopic 3D Video***

Chamitha de Alwis (University of Surrey, United Kingdom); Varuna De Silva (University of Surrey, United Kingdom); H Kodikara Arachchi (University of Surrey, United Kingdom); Anil Fernando (University of Surrey, United Kingdom); Ahmet Kondozi (University of Surrey, United Kingdom)  
pp. 607-611

### ***Low Complexity Disparity Estimation for Immersive 3D Video Transmission***

Brian Walter Micallef (University of Malta, Malta); Carl J. Debono (University of Malta, Malta); Reuben Farrugia (University of Malta, Malta)  
pp. 612-616

### ***Bandwidth Scalability and Efficient 2D and 3D Video Transmission over LTE Networks***

Moustafa Nasralla (Kingston University, United Kingdom); Ognjen Ognenoski (Kingston University, United Kingdom); Maria G. Martini (Kingston University, United Kingdom)  
pp. 617-621

### ***Objective quality prediction model for lost frames in 3D video over TS***

Bruno Feitor (Polytechnic Institute of Leiria, Portugal); Pedro A. Amado Assuncao (Instituto de Telecomunicacoes / Polytechnic Institute of Leiria, Portugal); Joao Soares (Instituto de Telecomunicacoes / University of Coimbra, Portugal); Luis Cruz (Instituto de Telecomunicacoes / University of Coimbra, Portugal); Rui Neto Marinheiro (Instituto Universitário de Lisboa, Instituto de Telecomunicações, Portugal)  
pp. 622-625

## IIMC-P1: Poster session

### ***Publish/Subscribe Gateway for Voice Communication***

Sarantorn Bisalbutra (Ericsson Research, NomadicLab, Finland)  
pp. 626-630

### ***On the performance response of delay-bounded energy-aware bandwidth allocation scheme in wireless networks***

Christos Dimitriou (Dept. of Computer Science, University of Nicosia, Cyprus); Constandinos X. Mavromoustakis (University of Nicosia, Cyprus); George Mastorakis (Technological Educational Institute of Crete, Greece); Evangelos Pallis (Technological Educational Institute of Crete, Greece)  
pp. 631-636

### ***Enhancing QoS/QoE in Multimedia Networks***

Catalina Felicia Mancas (University of Craiova, Romania)  
pp. 637-641

### ***Performance evaluation in ns-3 of a video delivery framework for next generation cellular networks***

Daniele Munaretto (University of Padova & CFR, Italy); Marco Zanforlin (University of Padova, Italy); Michele Zorzi (University of Padova, Italy)  
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### ***Networked Music Performance over Information-Centric Networks***

Charilaos Stais (Athens University of Economics and Business, Greece); Yannis Thomas (Athens University of Economics and Business (AUEB), Greece); George Xylomenos (Athens University of Economics and Business, Greece); Christos Tsilopoulos (Athens University of Economics and Business, Greece)  
pp. 647-651

### ***QoE-aware Traffic Management for Mobile Video Delivery***

Bo Fu (DOCOMO Euro-Labs, Germany); Gerald Kunzmann (DOCOMO Communications Laboratories Europe, Germany); Michelle M Wetterwald (EURECOM, France); Daniel Corujo (Instituto de Telecomunicações Aveiro & Universidade de Aveiro, Portugal); Rui Ferreira Da Costa (Alcatel Lucent Bell Labs, France)  
pp. 652-656

### ***Network Video Quality Assessment Based on MDI***

Zhiming Shi (Beijing University of Posts and Telecommunications, P.R. China); Hui Liu (Beijing University of Posts and Telecommunications, P.R. China)  
pp. 657-661

### ***A Study on the Perceived Quality of 3D Video subject to Packet Losses***

Chaminda T. E.R. Hewage (University of Kingston, United Kingdom); Maria G. Martini (Kingston University, United Kingdom); Marco Brandas (Plusure Srl, Italy); Demuni De Silva (University of Surrey, United Kingdom)  
pp. 662-666

### ***Objective Measurement of Transmission Losses and Compression Artefacts in Stereoscopic 3D Video***

Ilias Politis (University of Patras, Greece); Demuni De Silva (University of Surrey, United Kingdom); Safak Dogan (University of Surrey, United Kingdom); Chamitha de Alwis (University of Surrey, United Kingdom); Tasos Dagiuklas (Hellenic Open University & University of Patras, Greece); Ahmet Kondoç (University of Surrey, United Kingdom)  
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## **IIMC-02: Multimedia Streaming**

### ***A Failover Mechanism for Peer-to-Peer Streaming over Multiple Multicast Trees***

Konstantinos Birkos (University of Patras, Greece); Christos Papageorgiou (University of Patras, Greece); Tasos Dagiuklas (Hellenic Open University & University of Patras, Greece); Stavros Kotsopoulos (Wireless Telecommunications Laboratory, Greece)  
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### ***Adaptive Streaming over Content Centric Networks in Mobile Networks using Multiple Links***

Stefan Lederer (Alpen-Adria-Universität Klagenfurt, Austria); Christopher Mueller (Alpen-Adria-Universität Klagenfurt, Austria); Benjamin Rainer (Alpen-Adria-Universität Klagenfurt, Austria); Christian Timmerer (Alpen-Adria-Universität Klagenfurt, Austria); Hermann Hellwagner (Klagenfurt University, Austria)  
pp. 677-681

### ***A Study on Quality of Experience for Adaptive Streaming Service***

Yitong Liu (Beijing University of Post and Telecommunications, P.R. China); Yun Shen (Beijing University of Posts and Telecommunications, P.R. China); Mao Yinian (Qualcomm Incorporated, USA); Jing Liu (Beijing University of Posts and Telecommunications, P.R. China); Qi Lin (Beijing University of Posts and Telecommunications, P.R. China); Dacheng Yang (Beijing University of Posts and Telecommunications, P.R. China)  
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### ***A Media Aware Platform for Real-time Stereoscopic Video Streaming Adaptation***

Athanasios Kordelas (Department of Electrical and Computer Engineering & University of Patras, ICT ROMEO, Greece); Ilias Politis (University of Patras, Greece); Asimakis Lykourgiotis (University of Patras, Greece); Tasos Dagiuklas (Hellenic Open University & University of Patras, Greece); Stavros Kotsopoulos (Wireless Telecommunications Laboratory, Greece)  
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# ICC'13 WS - Workshop on Information Security over Noisy and Lossy Communication Systems (InfSec)

## InfSec-01: session 1

### ***Wireless Information-Theoretic Security in MANETs***

Theofilos Chrysikos (University of Patras, Greece); Tasos Dagiuklas (Hellenic Open University & University of Patras, Greece); Stavros Kotsopoulos (Wireless Telecommunications Laboratory, Greece)  
pp. 692-696

### ***Previous Messages Provide the Key to Achieve Shannon Capacity in a Wiretap Channel***

Shahid Mehraj Shah (Indian Institute of Science, India); Parameswaran S (Indian Institute of Technology, Kharagpur, India); Vinod Sharma (Indian Institute of Science, India)  
pp. 697-701

## InfSec-02: session 2

### ***Blind QIM-LDPC Watermarking of 3D-Meshes***

Bata Vasic (University of Nis, Faculty of Electronic Engineering & Silicon Studio, Serbia); Bane Vasić (University of Arizona, USA)  
pp. 702-706

### ***Optimization of the parity-check matrix density in QC-LDPC code-based McEliece cryptosystems***

Marco Baldi (Università Politecnica delle Marche, Italy); Marco Bianchi (Università Politecnica delle Marche, Italy); Franco Chiaraluce (Università Politecnica delle Marche, Italy)  
pp. 707-711

### ***Unidirectional Error Correction by Crypto Functions***

Wael Adi (Technical University of Braunschweig, Germany); Mustafa Ayoob, Agha (Technical University of Braunschweig, Germany)  
pp. 712-716

### ***AACI: The Mechanism for Approximate Authentication and Correction of Images***

S. Amir Hossein A. E. Tabatabaei (University of Siegen, Germany); Obaid Ur-Rehman (University of Siegen, Germany); Natasa Zivic (University of Siegen, Germany)  
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# ICC'13 WS - Workshop on Mobile Cloud Networking and Services (MCN)

## MCN-01: Mobile Cloud Services and Applications

### ***A Resource Allocation Controller for Cloud-based Adaptive Video Streaming***

Luca De Cicco (Politecnico di Bari, Italy); Saverio Mascolo (Politecnico di Bari, Italy); Dario Calamita (Politecnico di Bari, Italy)  
pp. 723-727

### ***Tradeoff between Performance Improvement and Energy Saving in Mobile Cloud Offloading Systems***

Huaming Wu (Free University of Berlin, Germany); Qiushi Wang (Free University of Berlin, Germany); Katinka Wolter (Free University of Berlin, Germany)  
pp. 728-732

### ***A First Look at Quality of Experience in Personal Cloud Storage Services***

Pedro Casas (Telecommunications Research Center Vienna (FTW), Austria); Hans Ronald Fischer (FTW - Telecommunications Research Center Vienna, Austria); Stefan Suette (Telecommunications Research Center Vienna (FTW), Austria); Raimund Schatz (Telecommunications Research Center Vienna (FTW), Austria)  
pp. 733-737

### ***SLA-Driven Predictive Orchestration for Distributed Cloud-Based Mobile Services***

Alexandru-Florian Antonescu (University Bern & SAP, Switzerland); Andre Gomes (University of Bern, Switzerland); Philip Robinson (SAP UK, United Kingdom); Torsten Ingo Braun (University of Bern, Switzerland)  
pp. 738-743

### ***Moving Applications from the Host to the Network: Experiences, Challenges and Findings***

Ivano Cerrato (Politecnico di Torino, Italy); Marco Pramotton (Politecnico di Torino, Italy); Fulvio Risso (Politecnico di Torino, Italy)  
pp. 744-749

## MCN-02: Mobile Cloud Networking

### ***Cloud Computing Models and their Application in LTE based Cellular Systems***

Arjan Staring (University of Twente, The Netherlands); Georgios Karagiannis (University of Twente, The Netherlands)  
pp. 750-755

### ***Base station virtualization for OFDM air interfaces with strict isolation***

Wolfgang Kiess (DOCOMO Euro-Labs, Germany); Petra Weitkemper (DOCOMO Euro-Labs, Germany); Ashiq Khan (NTT DOCOMO, Inc. & DOCOMO R&D Center, Japan)  
pp. 756-760

### ***A Secure WLAN Access Sharing System Using SNS***

Jun Hyuk Choi (Kyungpook National University, Korea); Yeon-Kyung Woo (Kyungpook National University, Korea); Seung-Man Chun (Kyungpook National University, Korea); Jong Tae Park (Kyungpook National University, Korea)  
pp. 761-765

## MCN-03: Panel "Mobile Cloud Networking and Services"

Laurent Roulet (ALU, France): "How Cloud RAN can enable Remote Radio Head architecture for next generation multi-antenna mobile access"

Anna Tzanakaki (Athens Information Technology (AIT), Greece): "Supporting Fixed and Mobile Cloud Services: The Challenge of Converging Heterogeneous Network and IT infrastructures"

Borje Ohlman (Ericsson, Sweden): "How can Mobile Cloud and Information-centric Networking blend ?"

Michael Devetsikiotis (NC State University, USA): "Designing Smarter Networks: Modeling Communications in the Era of Service Awareness, Social Networks and the Smart Grid"

# ICC'13 WS - Workshop on Molecular and Nanowire Communication (MONACOM)

## MONACOM-01: Channel Analysis

### ***Molecular Transport in Microfluidic Channels for Flow-induced Molecular Communication***

A. Ozan Bicen (Georgia Institute of Technology, USA); Ian F. Akyildiz (Georgia Institute of Technology, USA)  
pp. 766-770

### ***Synaptic Interference Channel***

Derya Malak (University of Texas at Austin, USA); Ozgur B. Akan (Koc University, Turkey)  
pp. 771-775

### ***A Tunnel-based Approach for Signal Shaping in Molecular Communication***

Mehmet Sukru Kuran (Bogazici University, Turkey); Huseyin Birkan Yilmaz (Bogazici University, Turkey); Tuna Tugcu (Bogazici University, Turkey)  
pp. 776-781

### ***Modelling the Reception Process in Diffusion-based Molecular Communication Channels***

Hoda Shahmohammadian (University of Calgary, Canada); Geoffrey G. Messier (University of Calgary, Canada); Sebastian Magierowski (University of Calgary, Canada)  
pp. 782-786

### ***Microfluidic Networks: design and test of a pure hydrodynamic switching function***

Elena De Leo (University of Catania, Italy); Lidia Donvito (University of Catania, Italy); Alfio Lombardo (University of Catania, Italy); Giacomo Morabito (University of Catania, Italy); Laura Galluccio (DIEEI, Italy)  
pp. 787-791

### ***Channel Capacity of Calcium Signalling Based on Inter-cellular Calcium Waves in Astrocytes***

Akif Cem Heren (Bogazici University, Turkey); Mehmet Sukru Kuran (Bogazici University, Turkey); Huseyin Birkan Yilmaz (Bogazici University, Turkey); Tuna Tugcu (Bogazici University, Turkey)  
pp. 792-797

## MONACOM-03: Systems and networks

### ***Introducing purely hydrodynamic networking mechanisms in microfluidic systems***

Andrea Zanella (University of Padova, Italy); Andrea Biral (University of Padova, Italy)  
pp. 798-803

### ***Nano-scale reservoir computing***

Oliver Obst (CSIRO, Australia); Adrian Trinchi (CSIRO, Australia); Simon Hardin (CSIRO, Australia); Matthew Chadwick (CSIRO, Australia); Ivan Cole (CSIRO, Australia); Tim Muster (CSIRO, Australia); Nigel Hoschke (CSIRO, Australia); Diethelm Ostry (CSIRO, Australia); Don Price (CSIRO, Australia); Khoa Pham (CSIRO, Australia); Tim Wark (CSIRO, Australia)  
pp. 804-808

### ***Cooperative Drug Delivery through Molecular Communication among Biological Nanomachines***

Tadashi Nakano (Osaka University, Japan); Michael J. Moore (Pennsylvania State University, USA); Yutaka Okaie (Osaka University, Japan); Akihiro Enomoto (University of California, Irvine, USA); Tatsuya Suda (University Netgroup Inc., USA)  
pp. 809-812

### ***Multi objective design for bacterial communication networks***

Claudio Angione (University of Cambridge, United Kingdom); Giovanni Carapezza (University of Catania, Italy); Jole Costanza (University of Catania, Italy); Pietro Lio` (University of Cambridge, United Kingdom); Giuseppe Nicosia (University of Catania, Italy)  
pp. 813-817



## MONACOM-04: Design analysis

***Using Dimensional Analysis to Assess Scalability and Accuracy in Molecular Communication***

Adam J. G. Noel (University of British Columbia, Canada); Karen C Cheung (University of British Columbia, Canada); Robert Schober (University of British Columbia, Canada)  
pp. 818-823

***Reliability of Multi-path Virus Nanonetworks***

Frank Walsh (Waterford Institute of Technology, Ireland); Sasitharan Balasubramaniam (Tampere University of Technology, Finland)  
pp. 824-828

# ICC'13 WS - Workshop on Optical-Wireless Integrated Technology for Systems and Networks (OWITSN)

## OWITSN-01: Architectures and Techniques

Chair: John Mitchell, University College London, UK

### ***Coherent, Phase Modulated Fiberoptic Link***

Peter Herczfeld (Drexel University, USA); Yifei Li (University of Mass. Dartmouth, USA)  
pp. 829-832

### ***Use of Companding to Reduce Isolation Requirements in the Remote Antenna Unit of an OFDM Radio over Fiber Link***

Philippos Assimakopoulos (University of Kent & Photonics lab, United Kingdom); Anthony Nkansah (University of Kent, United Kingdom); Nathan J Gomes (University of Kent, United Kingdom)  
pp. 833-837

### ***Radio-over-Fiber Photonic Wireless Bridge in the W-Band***

Sebastian Babel (University of Duisburg-Essen & National Institute of Information and Communications Technology JAPAN, Germany); Andreas Stöhr (University of Duisburg-Essen, Germany); Atsushi Kanno (National Institute of Information and Communications Technology, Japan); Tetsuya Kawanishi (National Institute of Information and Communications Technology, Japan)  
pp. 838-842

### ***Investigation of Intra/Inter-Band Cross-Modulation in Multiband Radio-over-Fiber Systems***

Jing Wang (Georgia Institute of Technology, USA); Cheng Liu (Georgia Institute of Technology, USA); Ming Zhu (Georgia Institute of Technology, USA); Gee-Kung Chang (Georgia Tech, USA)  
pp. 843-847

### ***EVM and SER Performance of OFDM Signals with Different IFFT Sizes Under Nonlinear Distortion***

Philippos Assimakopoulos (University of Kent & Photonics lab, United Kingdom); Rodrigo Santamaria (University of Kent, United Kingdom); Nathan J Gomes (University of Kent, United Kingdom)  
pp. 848-852

### **Coffee Break**

## OWITSN-02: Integration of emerging standards

Chair: Dr Nathan Gomes, University of Kent, UK

### ***Advances in ultra-wideband and adaptive microwave photonic signal processors***

Robert Minasian (University of Sydney, Australia); Erwin Chan (University of Sydney, Australia); Xiaoke Yi (University of Sydney, Australia)  
pp. 853-857

### ***A General Model for Hybrid Fiber-Wireless (FiWi) Access Network Virtualization***

Qinglong Dai (Beijing University of Posts and Telecommunications, P.R. China); Guochu Shou (Beijing University of Posts and Telecommunications, P.R. China); Yihong Hu (Beijing University of Posts and Telecommunications, P.R. China); Zhigang Guo (Beijing University of Posts and Telecommunications, P.R. China)  
pp. 858-862

**Quality-of-Service-Aware Fiber Wireless Sensor Network Gateway Design for the Smart Grid**

Nima Zaker (University of Ottawa, Canada); Burak Kantarci (University of Ottawa & School of Electrical Engineering and Computer Science, Canada); Melike Erol-Kantarci (University of Ottawa, Canada); Hussein T Mouftah (University of Ottawa, Canada)  
pp. 863-867

**Radio-over-Fiber Quintuple-Play Service Provision for Deep Fiber-to-the-Home Passive Networks**

Roberto Llorente (Universidad Politecnica de Valencia, Spain); Maria Morant (Universidad Politecnica de Valencia & Valencia Nanophotonics Technology Center, Spain); Eloy Pellicer (Universidad Politecnica de Valencia, Spain); Milan Herman (Towercom as, Slovakia); Zsolt Nagy (Towercom as, Slovakia); Javier Herrera (Fibernova Systems, Spain); Jose Correcher (DAS Photonics, Spain); Tiago Alves (Instituto de Telecomunicações, Portugal); Adolfo Cartaxo (IST-TUL, Portugal); Terry Quinlan (University of Essex, United Kingdom); Stuart D Walker (University of Essex, United Kingdom); Cláudio Rodrigues (PT Inovação, Portugal); Pierre Cluzeaud (Thales Communications, France); Axel Schmidt (HTW Dresden, Germany); Rakesh Sambaraju (Corning Incorporated, USA); Radoslaw Piesiewicz (Wrocławskie Centrum Badan EIT+, Poland); Eloy Rico (DAS Photonics, Spain)  
pp. 868-872

**Very High Throughput 60GHz wireless enterprise networks over GPON infrastructure**

George Kalfas (1Information Technologies Institute, Center for Research and Technology Hellas and Technical Unvers & Information Technologies Institute, Greece); Stella Markou (Aristotle University of Thessaloniki, Greece); Dimitris Tsiokos (Center for Research and Technology Hellas, Greece); Christos Verikoukis (Telecommunications Technological Centre of Catalonia, Spain); Nikos Pleros (Aristotle University of Thessaloniki, Greece)  
pp. 873-878

**Lunch Break**

## OWITSN-03: Network Integration

Chair: Prof Hussein Mouftah, University of Ottawa, Canada

**Architecture and Applications of a Versatile Small-Cell, Multi-Service Cloud Radio Access Network Using Radio-over-Fiber Technologies**

Gee-Kung Chang (Georgia Tech, USA); Cheng Liu (Georgia Institute of Technology, USA); Liang Zhang (Shanghai Jiao Tong University, P.R. China)  
pp. 879-883

**Traffic and Interference-aware Dynamic BBU-RRU Mapping in C-RAN TDD with Cross-subframe Coordinated Scheduling/Beamforming**

Dalin Zhu (NEC Laboratories China, P.R. China); Ming Lei (NEC Laboratories China, P.R. China)  
pp. 884-889

**Converged fiber-wireless access networks for next generation mobile backhaul enabling CoMP**

Yizhuo Yang (The University of Melbourne, Australia)  
pp. 890-894

**A Framework for Joint Optical-Wireless Resource Management in Multi-RAT, Heterogeneous Mobile Networks**

Anna Zakrzewska (Technical University of Denmark, Denmark); Andrijana Popovska (Technical University of Denmark, Denmark); Henrik Christiansen (Technical University of Denmark, Denmark); Ying Yan (Technical University of Denmark, Denmark); Aleksandra Checko (Technical University of Denmark, Denmark); Anton Dogadaev (Technical University of Denmark, Denmark); Sarah Ruepp (Technical University of Denmark, Denmark); Michael S. Berger (Technical University of Denmark, Denmark); Lars Dittmann (Technical University of Denmark, Denmark)  
pp. 895-899

***Self-organized Cooperative 5G RANs with Intelligent Optical Backhauls for Mobile Cloud Computing***

Milos Milosavljevic (University of Hertfordshire, United Kingdom); Stratis Sofianos (University of Hertfordshire, United Kingdom); Pandelis Kourtessis (University of Hertfordshire, United Kingdom); John Micheal Senior (University of Hertfordshire, United Kingdom)  
pp. 900-904

**Coffee Break**

**OWITSN-04: Future Directions**

Chair: Steve Weinstein

Panel

Volker Jungnickel, Fraunhofer Heinrich Hertz Institute, Germany  
Chih-Lin I, Chief Scientist for Wireless Technologies, China Mobile  
and others to be confirmed

***Backhaul Requirements for Inter-site Cooperation in Heterogeneous LTE-Advanced Networks***

Volker Jungnickel (Fraunhofer Heinrich Hertz Institute, Germany); Konstantinos Manolakis (Technische Universität Berlin, Germany); Stephan Jaeckel (Fraunhofer Heinrich Hertz Institute, Germany); Moritz Lossow (Fraunhofer Heinrich-Hertz-Institute, Germany); Peter Farkas (Fraunhofer Heinrich Hertz Institute, Germany); Michael Schlosser (Fraunhofer-Institute for Telecommunications Heinrich-Hertz-Institut, Germany); Volker Braun (Alcatel-Lucent, Germany)  
pp. 905-910

**Panel Session**

# ICC'13 WS - Workshop on Radar and Sonar Networks (RSN)

## RSN-01: Keynote Session

## RSN-02: target detection and classification

### ***Target Detection - Distributed radar sensor network (RSN) vs. MIMO-RSN***

Yang Liu (University of Electronic Science and Technology of China, P.R. China); Jing Liang (University of Electronic Science and Technology, P.R. China)  
pp. 911-915

### ***SAR Image Superpixels by Minimizing a Statistical Model and Ratio of Mean Intensity Based Energy***

Jilan Feng (University of Electronic Science and Technology of China, P.R. China); Yiming Pi (University of Electronic Sciences and Technology, P.R. China); Jianyu Yang (School of Electronic Engineering, P.R. China)  
pp. 916-920

### ***Terahertz Imaging Radar with Aperture Synthetic Techniques for Object Detection***

Biao Zhang (University of Electronic Science and Technology of China, P.R. China); Yiming Pi (University of Electronic Sciences and Technology, P.R. China); Xiaobo Yang (University of Electronic Science and Technology of China, P.R. China)  
pp. 921-925

### ***Target Detection for THz Radar Based on Information Geometry***

Zhengwu Xu (University of Electronic Science and Technology of China, P.R. China); Tong Liu (University of Electronic Science and Technology of China, P.R. China); Ming Lv (University of Electronic Science and Technology of China, P.R. China)  
pp. 926-930

### ***An Improved Angular Super-Resolution Approach Based on Constrained Optimization***

Yuebo Zha (University of Electronic Science and Technology of China, P.R. China)  
pp. 931-935

## RSN-03: radar networks

### ***A Method of Target Identification with UWB Based on Genetic Algorithm and Fuzzy Pattern Recognition***

Yanteng Wang (Beijing University of Posts & Telecommunications, P.R. China); Ting Jiang (Beijing University of Posts & Telecommunications, P.R. China)  
pp. 936-940

### ***Target Identification in Foliage Environment Using Selected Bispectra and Extreme Learning Machine***

You Minglei (Beijing University of Posts and Telecommunications, P.R. China); Ting Jiang (Beijing University of Posts & Telecommunications, P.R. China)  
pp. 941-945

### ***Application of the Extraction of the Image Feature Points by Improved SIFT Algorithm***

Ruian Liu (Tianjin Normal University, P.R. China); Junsheng Zhang (Tianjin Normal University, P.R. China); Lei Wang (Tianjin Normal University, P.R. China); Baoju Zhang (Tianjin Normal University, P.R. China)  
pp. 946-949

### ***Sparse Sampling of Non-stationary Signal for Radar Signal Processing***

Qiong Wu (University of Texas at Arlington, USA); Qilian Liang (University of Texas at Arlington, USA)  
pp. 950-954

***Through wall detection of human being based on SPC and Wavelet Packet Transform by UWB radar***

Wei Wang (Tianjin Normal University, P.R. China); Baoju Zhang (Tianjin Normal University, P.R. China); Jiasong Mu (Tianjin Normal University, P.R. China)  
pp. 955-958

**RSN-04: networking and optimization**

***Optical Transfer Function-based Micro Image Enhancement Algorithm***

Yaqiu Sun (Tianjin Normal University, P.R. China); Xin Yin (Tianjin Normal University, P.R. China)  
pp. 959-963

***A reconstructed algorithm based on QPSO in Compressed Sensing***

Qing Lei (Tianjin Normal University, P.R. China); Baoju Zhang (Tianjin Normal University, P.R. China); Wei Wang (Tianjin Normal University, P.R. China); Jiasong Mu (Tianjin Normal University, P.R. China); Xiaorong Wu (Tianjin Normal University, P.R. China)  
pp. 964-966

***Performance Evaluation of Modified OFDM for Underwater Communications***

Prashant Kumar (Indian Institute of Technology Patna, India); Preetam Kumar (Indian Institute of Technology Patna, India)  
pp. 967-971

***Information Theoretic Performance Bounds for Noisy Compressive Sensing***

Junjie Chen (University of Texas at Arlington, USA); Qilian Liang (University of Texas at Arlington, USA); Baoju Zhang (Tianjin Normal University, P.R. China); Xiaorong Wu (Tianjin Normal University, P.R. China)  
pp. 972-976

***Adaptive Compressive Sensing for Multiuser OFDM System***

Ji Wu (University of Texas At Arlington, USA); Qilian Liang (University of Texas at Arlington, USA); Baoju Zhang (Tianjin Normal University, P.R. China); Xiaorong Wu (Tianjin Normal University, P.R. China)  
pp. 977-981

# ICC13 WS - Workshop on Smart Communication Protocols and Algorithms (SCPA)

## SCPA-01: SCPA-01

### ***Implementing and Evaluating Improved MAC Efficiency Through Payload Extension in 802.11n Networks***

Eduardo Rocha (University of Aveiro & Instituto de Telecomunicações, Portugal); Rui L Aguiar (University of Aveiro & Instituto de Telecomunicações, Portugal); Daniel Corujo (Instituto de Telecomunicações Aveiro & Universidade de Aveiro, Portugal)  
pp. 982-987

### ***Localization System for Wireless Networks***

Hugo Fonseca (University of Aveiro/Instituto de Telecomunicações, Portugal); António Nogueira (University of Aveiro/Instituto de Telecomunicações, Portugal); Paulo Salvador (Instituto de Telecomunicações, DETI, University of Aveiro, Portugal)  
pp. 988-993

### ***Pilot Protection Schemes over a Multi-service WiMAX Network in the Smart Grid***

Reduan H Khan (The University of Newcastle, Australia); Jason Brown (University of Newcastle, Australia); Jamil Y Khan (The University of Newcastle, Australia)  
pp. 994-999

### ***A Modified Joint Uplink-Downlink Opportunistic Scheduling for Quality of Service Guarantees***

Nizar Zorba (QMIC, Qatar); Elias Yaacoub (Qatar Mobility Innovations Center (QMIC), Qatar); Ahmad El-Hajj (American University of Beirut, Lebanon); Zaher Dawy (American University of Beirut, Lebanon)  
pp. 1000-1004

### ***Taking Advantage of Interference by Rate Control Algorithms in Wireless Networks***

Vangelis Angelakis (Linköping University, Sweden); Shiva Elyasi (Linköping University, Sweden); Sesanka Katuri (Linköping University, Sweden); Di Yuan (Linköping University, Sweden)  
pp. 1005-1009

### ***Cooperative Multicast Exploiting Physical Layer Network Coding: A Performance Analysis***

Vasileios Miliotis (Universitat Politècnica de Catalunya, Spain); Luis Alonso (Universidad Politecnica de Catalunya-BarcelonaTECH & Telecommunications and Aerospace Engineering School of Castelldefels, Spain); Christos Verikoukis (Telecommunications Technological Centre of Catalonia, Spain)  
pp. 1010-1014

## SCPA-02: SCPA-02

### ***Detection and protection of the attacks to the sheep and goats using an Intelligent Wireless Sensor Network***

Ferran Llario (Universidad Politécnica de Valencia, Spain); Sandra Sendra (Universidad Politécnica de Valencia, Spain); Lorena Parra (Universidad Politécnica de Valencia, Spain); Jaime Lloret (Universidad Politécnica de Valencia, Spain)  
pp. 1015-1019

### ***Using Multiscale Traffic Analysis to Detect WPS Attacks***

Ivo Petiz (Instituto de Telecomunicações, University of Aveiro, Portugal); Eduardo Rocha (University of Aveiro & Instituto de Telecomunicações, Portugal); Paulo Salvador (Instituto de Telecomunicações, DETI, University of Aveiro, Portugal); António Nogueira (University of Aveiro/Instituto de Telecomunicações, Portugal)  
pp. 1020-1025

### ***Top-k Query Result Completeness Verification in Sensor Networks***

Chia-Mu Yu (Academia Sinica and National Taiwan University, Taiwan); Guo-Kai Ni (National Taiwan University, Taipei, Taiwan); Ing-Yi Chen (National Taipei University of Technology, Taiwan); Erol Gelenbe (Imperial College London, United Kingdom); Sy-Yen Kuo (National Taiwan University, Taiwan)

***A Two-step Vertical Handoff Decision Algorithm Based on Dynamic Weight Compensation***

Chao Liu (Beijing University of Posts and Telecommunications, P.R. China); Yong Sun (Beijing University of Posts and Telecommunications, P.R. China); Peng Yang (Beijing University of Posts and Telecommunications, P.R. China); Zhen Liu (Beijing University of Posts and Telecommunications, P.R. China); Haijun Zhang (Beijing University of Chemical Technology, P.R. China); Xiang Ming Wen (Beijing University of posts and telecommunications, P.R. China)

pp. 1031-1035

***On the effect of the physical layer on VoIP Quality of user Experience in wireless networks***

Ramon Sanchez Iborra (Technical University of Cartagena, Spain); Maria-Dolores Cano (Technical University of Cartagena, Spain); Joan Garcia-Haro (Technical University of Cartagena, Spain)

pp. 1036-1040

## SCPA-03: SCPA-03

***Secure and Efficient Context Data Collection using Content-Centric Networking***

Sin-seok Seo (POSTECH, Korea); Joon-Myung Kang (University of Toronto, Canada); Alberto Leon-Garcia (University of Toronto, Canada); Yoonseon Han (POSTECH, Korea); James W. Hong (POSTECH, Korea)

pp. 1041-1045

***An Adaptive QoS Scheme for WSN-based Smart Grid Monitoring***

Irfan S. Al-Anbagi (University of Ottawa, Canada); Melike Erol-Kantarci (University of Ottawa, Canada); Hussein T Mouftah (University of Ottawa, Canada)

pp. 1046-1051

***Power Charging and Discharging Scheduling for V2G Networks in the Smart Grid***

Ming Zeng (University of Electronic Science and Technology of China, P.R. China); Supeng Leng (University of Electronic Science and Technology of China, P.R. China); Yan Zhang (Simula Research Lab, Norway)

pp. 1052-1056

***VACaMobil: VANET Car Mobility Manager for OMNeT++***

Miguel Báguena (Universidad Politécnica de Valencia, Spain); Sergio M. Tornell (Universitat Politècnica de València, Spain); Alvaro Torres (Universidad Politécnica de Valencia, Spain); Carlos T. Calafate (Universidad Politécnica de Valencia, Spain); Juan-Carlos Cano (Universidad Politecnica de Valencia, Spain); Pietro Manzoni (Universidad Politécnica de Valencia, Spain)

pp. 1057-1061

***Rock-Scissors-Paper Cycle of Cooperation Strategies in Opportunistic Mobile Networks***

Sujata Pal (Indian Institute of Technology Kharagpur, India); Sudip Misra (Indian Institute of Technology-Kharagpur, India); Barun Kumar Saha (Indian Institute of Technology Kharagpur, India)

pp. 1062-1066

***Dynamic Coalition Formation in a Smart Grid: A Game Theoretic Approach***

Ayan Mondal (Indian Institute of Technology, Kharagpur, India); Sudip Misra (Indian Institute of Technology-Kharagpur, India)

pp. 1067-1071

## SCPA-04: SCPA-04

***Improved Linearized Combinatorial Model (ILCM) for Optimal Frame Size Selection in ALOHA-based RFID Systems***

Petar Šolić (University of Split & FESB, Croatia); Joško Radić (University of Split, Croatia); Hrvoje Dujmic (University of Split, Croatia); Matko Saric (University of Split, Croatia); Mladen Russo (University of Split, Croatia); Maja Stella (University of Split, Croatia); Dinko Begusic (Split University, Croatia); Nikola Rožić (University of Split, Croatia)

pp. 1072-1077



***Exploration of Capacity Gains by Inter-Cell Interference Coordination based on User Distribution***

Georgios P. Koudouridis (Huawei Technologies Sweden R&D Center & Royal Institute of Technology, Sweden); Christer Qvarfordt (Huawei Technologies Sweden AB, Sweden)  
pp. 1078-1083

***A Novel Multi-Platform Service-based Approach for Learning Environments***

Orlando Pereira (University of Beira Interior, Portugal); Tiago Simões (Instituto de Telecomunicações, University of Beira Interior, Portugal); Jorge Costa (Instituto de Telecomunicações, University of Beira Interior, Portugal); Joel J. P. C. Rodrigues (Instituto de Telecomunicações, University of Beira Interior, Portugal)  
pp. 1084-1088

***A Spanning Tree Protocol over Mobile Wireless Ad Hoc Networks***

Tomé Gomes (Instituto de Telecomunicações, Portugal); Lucas Guardalben (University of Aveiro, Instituto de Telecomunicações, Portugal); Paulo Salvador (Instituto de Telecomunicações, DETI, University of Aveiro, Portugal); Susana Sargento (Instituto de Telecomunicações, Universidade de Aveiro, Portugal)  
pp. 1089-1094

***Scalable Resource and Admission Management in Class-Based Networks***

Evariste Logota (University of Aveiro, Instituto de Telecomunicações, Portugal); Carlos Campos (University of Aveiro, Portugal); Susana Sargento (Instituto de Telecomunicações, Universidade de Aveiro, Portugal); Augusto Jose Venancio Neto, Ph. D. (Universidade Federal do Rio Grande do Norte & Centro de Ciências Exatas da Terra, Brazil)  
pp. 1095-1100

***Stochastic modeling of internal wave induced acoustic signal fluctuation and performance evaluation of shallow UWANs***

Amit Mandal (Centre for Oceans, Rivers, Atmosphere and Land Sciences, India); Sudip Misra (Indian Institute of Technology-Kharagpur, India); Mihir Dash (Indian Institute of Technology-Kharagpur, India)  
pp. 1101-1105

# ICC'13 WS - Workshop on Small Cell Wireless Networks (SmallNets)

## SmallNets-01: Keynote 1 - Dr. Satoshi Nagata (NTT DOCOMO, Japan)

## SmallNets-02: Field Evaluation

### ***Multi-Cell Field Trial on a Wireless Feeder Uplink for Small Cells***

Michael Grieger (Technische Universität Dresden, Germany); Gerhard Fettweis (Technische Universität Dresden, Germany); Sven-Einar Breuer (TU Dresden, Germany)  
pp. 1106-1111

### ***Small Cell Densification Requirements in High Capacity Future Cellular Networks***

Xavier Gelabert (Huawei Technologies Sweden AB, Sweden); Peter Legg (Huawei Technologies Sweden AB, Sweden); Christer Qvarfordt (Huawei Technologies Sweden AB, Sweden)  
pp. 1112-1116

## SmallNets-P1: Power Control and Energy Efficiency

### ***A Novel Power Control Scheme for Macro-Pico Heterogeneous Networks with Biased Association***

Naga Sekhar Suruvu (Centre of Excellence in Wireless Technology (CEWIT), India); Sivakishore Reddy Yerrapareddy (Centre of Excellence in Wireless Technology, India); Nadeem Akhtar (Centre of Excellence in Wireless Technology, India); Klutto Milleth (Centre of Excellence in Wireless Technology, India)  
pp. 1117-1122

### ***Downlink Power Control in Two-tier OFDMA Femtocell Networks with Firefly Algorithm***

Hailun Xia (Beijing University of Posts and Telecommunications, P.R. China); Sainan Li (Beijing University of Posts and Telecommunications, P.R. China); Zhimin Zeng (Beijing University of Posts and Telecommunications, P.R. China)  
pp. 1123-1128

### ***Subchannel and Power Allocation Schemes for Clustered Femtocells in Two-Tier OFDMA HetNets***

Amr Abdelnasser (University of Manitoba, Canada); Ekram Hossain (University of Manitoba, Canada)  
pp. 1129-1133

### ***Open Loop Power Control Parameter Settings Impact on LTE HetNet Uplink Performance***

Krystian Safjan (Nokia Siemens Networks, Poland); Stanisław Strzyż (Nokia Siemens Networks, Poland); Klaus Pedersen (Nokia Siemens Networks, Denmark); Jens Steiner (Nokia Siemens Networks, Denmark); Claudio Rosa (Nokia Siemens Networks/Aalborg, Denmark)  
pp. 1134-1138

### ***Spectrum Breathing and Cell Load Balancing for Self Organizing Wireless Networks***

Hongseok Kim (Sogang University, Korea); Hyea Youn Kim (Sogang University, Korea); Yun Hee Cho (ETRI, Korea); Seung Hwan Lee (ETRI, Korea)  
pp. 1139-1144

### ***Optimal muting ratio for Enhanced Inter-Cell Interference Coordination (eICIC) in HetNets***

Sergio Lembo (Aalto University, Finland); Petteri Lunden (Nokia Research Center, Finland); Olav Tirkkonen (Aalto University, Finland); Kimmo Valkealahti (Nokia Research Center, Finland)  
pp. 1145-1149

### ***Improving the Energy-Efficiency of Dense LTE Networks by Adaptive Activation of Cells***

Kimmo Hiltunen (Ericsson Research, Oy L M Ericsson Ab, Finland)  
pp. 1150-1154

## SmallNets-03: Keynote 2 - Dr. Amitava Ghosh (Nokia Siemens Networks, USA)

### SmallNets-04: Mobile Offload Solutions

#### ***An LTE Offload Solution using Small Cells with D2D Links***

Hiroyuki Ishii (DOCOMO Innovations, Inc, Japan); Xilin Cheng (Colorado State University & DOCOMO Innovations, Inc., USA); Sayandev Mukherjee (DOCOMO Innovations Inc., USA); Bo Yu (Colorado State University, USA)  
pp. 1155-1160

#### ***Data Offloading in Load Coupled Networks: Solution Characterization and Convexity Analysis***

Chin Keong Ho (Institute for Infocomm Research, A\*STAR, Singapore); Di Yuan (Linköping University, Sweden); Sumei Sun (Institute for Infocomm Research, Singapore)  
pp. 1161-1165

## SmallNets-05: Keynote 3 - Dr. Holger Claussen (Bell-Labs, Ireland)

### SmallNets-06: Cooperative Small Cells

#### ***Efficient MAC Protocol for JT CoMP in Small Cells***

Moritz Lossow (Fraunhofer Heinrich-Hertz-Institute, Germany); Stephan Jaeckel (Fraunhofer Heinrich Hertz Institute, Germany); Volker Jungnickel (Fraunhofer Heinrich Hertz Institute, Germany); Volker Braun (Alcatel-Lucent, Germany)  
pp. 1166-1171

#### ***System Level Evaluation of Cooperative MIMO-OFDMA-Based Heterogeneous Networks***

Tarik Akbudak (University of Duisburg-Essen, Germany); Andreas Czyllwik (Universität Duisburg-Essen, Germany); Han Vinck (University of Duisburg-Essen, Germany)  
pp. 1172-1177

## SmallNets-P2: Performance Analysis and Evaluation

#### ***Architecture Design and Performance Evaluation for Future Green Small Cell Wireless Networks***

Gaoning He (Huawei Technologies, P.R. China); Shunqing Zhang (Huawei Technologies, Co. Ltd., P.R. China); Yan Chen (Huawei, P.R. China); Shugong Xu (Huawei, P.R. China)  
pp. 1178-1182

#### ***Enabling Multi-homed Femtocells Using SCTP***

John Fitzpatrick (Openet, Ireland); Frank A. Zdarsky (NEC Europe Ltd., Germany)  
pp. 1183-1188

#### ***Performance Effectiveness of using Micro Base Stations for Resilient LTE Multicast Networking***

Izhak Rubin (University of California at Los Angeles, USA); Hung-Bin Chang (University of California, Los Angeles, USA); Reuven Cohen (Technion, Israel)  
pp. 1189-1193

#### ***Performance Analysis of User Association Policies in Small Cell Networks Using Stochastic Petri Nets***

Yingkai Zhang (Beijing University of Posts and Telecommunications, P.R. China); Lei Lei (Beijing Jiaotong University, P.R. China); Hang Long (Beijing University of Posts & Telecommunications, P.R. China); Kan Zheng (Beijing University of Posts&Telecommunications, P.R. China)  
pp. 1194-1198

#### ***OFCDM-based Small Femtocells Embedded in OFDM-based Macro Cellular Network***

Fatima Hussain (Ryerson University, Canada); Alagan Anpalagan (Ryerson University, Canada)  
pp. 1199-1204

***Energy Saving Analysis and Evaluation in the Enhanced Local Area Architecture***

Bo Yu (Colorado State University, USA); Xiang Cheng (Peking University, P.R. China); Liuqing Yang (Colorado State University, USA)  
pp. 1205-1209

**SmallNets-07: Interference Management**

***Interference Mitigation based on Channel Allocation Knowledge for Dense Femtocell Scenarios***

Rania El Kharsa (Lebanese University, Lebanon); Jad Nasreddine (Mobinets, Lebanon); Janne Riihijärvi (RWTH Aachen University, Germany); Petri Mähönen (RWTH Aachen University, Germany)  
pp. 1210-1214

***Multi-carrier Cell Structures with Offset Sectorization for Heterogeneous Networks***

Holger Claussen (Bell Labs, Alcatel-Lucent, Ireland); Lester Ho (Bell Labs, Alcatel-Lucent, Ireland)  
pp. 1215-1220

***A Distributed Dynamic ABS Ratio Setting Scheme for Macro-Femto Heterogeneous Networks***

Liqi Gao (Beijing University of Posts and Telecommunications, P.R. China); Hui Tian (Beijing university of posts and telecommunications, P.R. China); Peng Tian (Beijing University of Posts and Telecommunications & Key Laboratory of Universal Wireless Communications, Ministry of Education, P.R. China); Jun Zhang (Beijing University of Posts and Telecommunications, P.R. China); Meng Wang (Beijing University of Posts and Telecommunications, P.R. China)  
pp. 1221-1225

**SmallNets-08: Keynote 4 - Prof. Gerhard Fettweis (TU Dresden, Germany)**

# ICC'13 WS - Workshop on Telecommunication Standards: From Research to Standards (R2S)

## R2S-Keynote: Keynote for Research-to-Standards Session

Academic Engagement in Standards: Getting it Right

ABSTRACT: It has been my experience that while there is, in principle, a mutual desire for engagement between the academic and standards communities, in practice most attempts by academia to contribute to standards are not effective. I believe this is due to the fact that in many cases, academic contributions are brought to the standards community at the wrong point in the standardization process. In this talk, I will focus on why that is and what would be the right time-frame for academic participation. I will illustrate my point using some examples, notably IETF, which has been successful in getting excellent academia interaction through IRTF. I will conclude by highlighting some current developments in the telecom standardization community which could greatly benefit from academic input right now.

## R2S-01: Research-to-Standards Session 1

3GPP / LTE

Keynote address by Chris Wallace, Sr. Director, Standards, InterDigital

### ***Disaster Response in 3GPP Mobile Networks***

Andreas Kunz (NEC Europe Ltd., Germany); Itsuma Tanaka (NTT DOCOMO, Japan); Syed S Husain (Telecom Consultant-Industry Standards & NTT DOCOMO, USA)  
pp. 1226-1231

### ***Seamless Authentication and Mobility Across Heterogeneous Networks using Federated Identity Systems***

Yousif Targali (InterDigital, USA); Vinod Choyi (Interdigital Communications Corp, USA); Yogendra Shah (InterDigital Communications Corp., USA)  
pp. 1232-1237

### ***IP aware radio scheduling Introducing IP QoS management in LTE networks***

Isabelle Hamchaoui (Orange Labs, France); Sebastien Jobert (France Telecom Orange, France); Sarah Boufelja (Telecom Bretagne, France)  
pp. 1238-1242

### ***Improving 3GPP-LTE Uplink Control Signaling by Repetition Across Frequency Bands***

Tumula V. K. Chaitanya (Linköping University, Sweden); Erik G. Larsson (Linköping University, Sweden)  
pp. 1243-1248

## R2S-02: Research to Standards: Special Invited Session

Panel Discussion: Bridging the Standardization Gap: Do We See Light at the End of the Tunnel?

This special session will feature presentations and panel discussion by leading members of global and regional standardization bodies. The session abstract is as follows:

As of now almost all of the established regional Standard Development Organizations (SDOs) reside in Europe, North America, and the Asian countries such as China, Japan, Korea. These SDOs and the membership they represent have been very successful in driving the standardization efforts inside their regions, and also in international organizations such as 3GPP, ITU, OMA, IEEE, etc. There is a widespread perception that the engagement of the industry, R&D organizations, and academia residing in the developing countries have not kept up with their counterparts in the developed parts of the world, and have not adequately contributed to the global standards ecosystem. Of late there has been a lot of progress in the awareness of this 'standardization gap' in the developing countries. The session will explore efforts to bridge this gap. In a platform where the established SDOs, both regional and global, and the efforts undertaken in the developing countries will exchange information on their individual work programmes, and their views on how collaborative efforts may help the future development of telecom and ICT standards.

Planned participants

Dr. Asok Chatterjee (Chair, Executive Director (DOSTI/India), VP for Industry Relations at Ericsson

Luis George Romero Saro, Director General (ETSI/Europe)

Cheryl Blum, Vice President, Standards and Technology (TIA/US)

Dr. K. J. Wee, VP of standards TTA/Korea

Dr. Alexander D. Gelman, CIO, IEEE ComSoc, Member of IEEE-SA Standards Board

## R2S-03: Research-to-Standards Session 3

Unlicensed and White Spaces

### ***Shared use of radio spectrum in the EU: from research projects to standards***

Paulo Marques (Instituto de Telecomunicações, Portugal); Jonathan Rodriguez (Instituto de Telecomunicações, Portugal); Simon Delaere (IBBT-SMIT, Vrije Universiteit Brussel, Belgium); Michael Gundlach (Nokia Siemens Networks, Germany); Dionysia Triantafyllopoulou (University of Surrey, United Kingdom); Klaus Moessner (University of Surrey, United Kingdom); Philippe Delahaye (NEC Technologies UK, France); Benoit Lecroart (NEC Technologies, France); Dominique Noguét (CEA LETI, France)

pp. 1249-1254

### ***IEEE802.11af with Partial Subcarrier System for effective use of TV White Spaces***

Keiichi Mizutani (National Institute of Information and Communications Technology, Japan); Zhou Lan (National Institute of Information and Communications Technology, Japan); Ryuhei Funada (National Institute of Information and Communications Technology, Japan); Hiroshi Harada (National Institute of Information & Communications Technology (NICT), Japan)

pp. 1255-1259

### ***Autonomous Spectrum Sharing in Heterogeneous White Space Networks***

Maziar Nekovee (Samsung Electronics, United Kingdom)

pp. 1260-1262

### ***How Many Smart Meters can be Deployed in a GSM cell?***

German Corrales Madueño (Aalborg University, Denmark); Čedomir Stefanović (Aalborg University & University of Novi Sad, Denmark); Petar Popovski (Aalborg University, Denmark)

pp. 1263-1268

### ***Advances in IEEE 802.11ah Standardization for Machine-Type Communications in Sub-1GHz WLAN***

Yuan Zhou (Institute for Infocomm Research, Singapore); Haiguang Wang (Institute for Infocomm Research, Singapore); Shoukang Zheng (Institute for Infocomm Research, Singapore); Zander Zhongding Lei (Institute for Infocomm Research, Singapore)

pp. 1269-1273

### ***Future Evolution of CSMA Protocols for the IEEE 802.11 Standard***

Luis Sanabria-Russo (Universitat Pompeu Fabra, Spain); Azadeh Faridi (Universitat Pompeu Fabra, Spain); Boris Bellalta (Universitat Pompeu Fabra, Spain); Jaume Barcelo (Universitat Pompeu Fabra, Spain); Miquel Oliver (Universitat Pompeu Fabra, Spain)

pp. 1274-1279

## R2S-04: Research-to-Standards Session 4

IP Networks

### ***All-path Bridging: Path Exploration as an Efficient Alternative to Path Computation in Bridging Standards***

Guillermo Ibáñez (Universidad de Alcalá. Escuela Politécnica Superior, Spain); Elisa Rojas (Universidad de Alcalá (UAH) Madrid, Spain)

pp. 1280-1285

### ***Exposing Energy-Aware Capabilities in Next Generation Network Devices***

Raffaele Bolla (University of Genoa, Italy); Roberto Bruschi (CNIT, Italy); Franco R. Davoli (University of Genoa & National Inter-University Consortium for Telecommunications (CNIT), Italy);

Pasquale Donadio (Alcatel-Lucent Italia, Italy); Leonardo Fialho (University of Texas at Austin & Texas Advanced Computing Center, USA); Martin Collier (Dublin City University, Ireland); Alfio Lombardo (University of Catania, Italy); Diego Reforgiato (University of Catania, Italy); Vincenzo Riccobene (University of Catania, Italy); Tivadar Szemethy (Netvisor, Hungary)  
pp. 1286-1290

***Enhancing Throughput Efficiency via Multiplexing and Header Compression over LISP Tunnels***

Jose Saldana (University of Zaragoza, Spain); Luigi Iannone (Telecom ParisTech, France); Diego Lopez (Telefonica I+D, Spain); Julián Fernández-Navajas (University of Zaragoza, Spain); José Ruiz-Mas (University of Zaragoza, Spain)  
pp. 1291-1296

***Distributed Mobility Management: Approaches and Analysis***

Hassan Ali-Ahmad (Orange Labs & Telecom Bretagne, France); Meryem Ouzzif (Orange Labs, France); Philippe Bertin (Orange Labs, France); Xavier Lagrange (Institut Mines Telecom / Telecom Bretagne & IRISA, France)  
pp. 1297-1302

***Improving Performance of Rate Control Mechanism for UDP Traffic over Heterogeneous Networks***

Hrishikesh Sharma (Innovation Labs, Tata Consultancy Services Ltd., India); Aditya Sood (Tata Consultancy Services Ltd., India); P. Balamuralidhar (Tata Consultancy Services, India)  
pp. 1303-1308

***Tunnel Concentrator Placement for Traffic Optimization in IPv4-IPv6 Coexisting Networks***

Peng Wu (Tsinghua University, P.R. China); Yong Cui (Tsinghua University, P.R. China); Jianping Wu (Tsinghua University, P.R. China); Minming Li (City University of Hong Kong, Hong Kong)  
pp. 1309-1313

# ICC'13 WS - Workshop on Traffic Identification and Classification on Advanced Network Services and Scenarios (TRICANS)

## TRICANS-01: Welcome and Keynote Session

Title: Traffic detection and classification, drivers, and coming challenges.

At a very basic level the evolution of traffic detection and classification as applied in networks will be driven by the complex relationship between Economics, Technology evolution and end-user expectations/behavior.

Starting with the end-user expectations and behavior, one thing that we know is that we need to communicate. We need to communicate with each other (phone call, video call, email, social networking); we need to keep updated with what is happening in; and we like to be entertained. The latter two implying communication between our device and the network. This translated to, in simple terms, that we now need the technical networks we have created - the internet and access to it.

Another aspect of end-user behavior is that we value our privacy, but mainly our privacy from others we know, or we have a tight interaction with. We are less concerned about privacy from those we don't know, except for when it applies to security. Take for example the privacy or incognito mode of browsers, they hide our browsing behavior from others we share a computer with, but not from the network provider. The latter sort of privacy tends to have a cost - a cost we are desire but are only willing to pay when it comes issues of security - e.g. for sending passwords or for making secure transactions. This is to say that there is a cost to obscuring traffic in the network, so it must have a good enough benefit to the end-user (which some applications do).

This leads to the economical aspect, which comes down to that whatever we deploy must have a motivation - the motivation tends to be to lie between being able to earn more money, or make more efficient use of the resources already available. Now, given as said above that we have a need to communicate, coupled with the trend that applications are increasingly bandwidth hungry (due to increased speeds), need to communicate, it implies that there is an increasing need to expand the capabilities of the network infrastructure, which in turn needs to be funded. It is already a market reality that we cannot allow for unlimited usage, nor can we expect that all users pay the same. We will also see content providers coming into the equation.

This has all being a pre-ambule to the most interesting part - that is the technology for traffic detection and classification. The main take-way from the above is that the requirements on the technology for traffic detection and classification are dependant upon its use: is it for charging, (or detecting no charging situations), is it for reporting and analytics, is it for security, or other. This is a continues tug-of-war for the traffic detection technologies.

## TRICANS-02: Traffic Classification Techniques

### ***Training Traffic Classifiers with Arbitrary Packet Sets***

Runxin Wang (Waterford Institute of Technology, Ireland); Lei Shi (Waterford Institute of Technology, Ireland); Brendan Jennings (Waterford Institute of Technology, Ireland)  
pp. 1314-1318

### ***Network Traffic Classification Using AdaBoost Dynamic***

Erico de Souza (University of Ottawa, Canada); Stan Matwin (University of Ottawa, Canada); Stenio Fernandes (Federal University of Pernambuco, Brazil)  
pp. 1319-1324

### ***Exploiting DNS Traffic to Rank Internet Domains***

Luca Deri (NTOP & IIT/CNR, Italy); Simone Mainardi (University of Pisa & Italian National Research Council, Italy); Maurizio Martinelli (Istituto di Informatica e Telematica - CNR, Italy); Enrico Gregori (CNR-IIT, Italy)  
pp. 1325-1329

## TRICANS-03: Applications of Traffic Classifiers

### ***PCA-Based Robust Anomaly Detection Using Periodic Traffic Behavior***

Takanori Kudo (Osaka University, Japan); Tatsuya Morita (Osaka University, Japan); Takahiro Matsuda (Osaka University, Japan); Tetsuya Takine (Osaka University, Japan)  
pp. 1330-1334

### ***Empowering Software Defined Network Controller with Packet-Level Information***

Sajad Shirali-Shahreza (University of Toronto, Canada); Yashar Ganjali (University of Toronto, Canada)  
pp. 1335-1339



***How to Validate Traffic Generators?***

Sándor Molnár (Budapest University of Technology and Economics, Hungary); Péter Megyesi (Budapest University of Technology and Economics, Hungary); Géza Szabó (Ericsson Research, Hungary)  
pp. 1340-1344

***Investigating the trade-off between overhead and delay for full packet traffic privacy***

Alfonso Iacovazzi (Sapienza University of Rome, Italy); Andrea Baiocchi (University of Roma Sapienza, Italy)  
pp. 1345-1350

***Online IRC Botnet Detection using a SOINN Classifier***

Francesco Carpine (Engineering Ingegneria Informatica Spa, Italy); Claudio Mazzariello (Federico II University of Napoli & Ansaldo-STS, USA); Carlo Sansone (Universita' degli Studi di Napoli Federico II, Italy)  
pp. 1351-1356

# ICC'13 WS - Workshop on Cloud Convergence: challenges for future infrastructures and services (WCC)

## WCC-01: Welcome and Keynote Session

## WCC-02: Cloud Convergence: Challenges for Future Infrastructures and Services

### ***Efficient Routing for PPETP in Multimedia Cloud Services***

Stefan Wieser (University of Udine, Italy); Pier Luca Montessoro (University of Udine, Italy); Laszlo Böszörményi (Klagenfurt University, Austria)  
pp. 1357-1361

### ***A hypervisor for infrastructure-enabled sensing Clouds***

Salvatore Distefano (Politecnico di Milano, Italy); Antonio Puliafito (University of Messina, Italy); Alessio Vecchio (University of Pisa & Dip. Ingegneria dell'Informazione, Italy); Giovanni Merlino (University of Messina, Italy)  
pp. 1362-1366

### ***Offloading Routing Complexity to the Cloud(s)***

Hasan T Karaoglu (Cisco Systems, Inc., USA); Murat Yuksel (University of Nevada - Reno, USA)  
pp. 1367-1371

### **Coffee Break**

### ***UCMS: User-side Cloud Management System***

Antonella Di Stefano (University of Catania, Italy); Giovanni Morana (University of Catania, Italy); Daniele Zito (University of Catania, Italy)  
pp. 1372-1377

### ***Copyright Protection in Peer-to-Peer Networks for Video-on-Demand Streaming***

Riccardo Bernardini (University of Udine, Italy); Roberto Rinaldo (University of Udine & Department of Electrical, Management and Mechanical Engineering, Italy)  
pp. 1378-1382

### ***Experimenting Content-Centric Networks in the Future Internet Testbed Environment***

Pedro Henrique Guimarães (Federal University of Rio de Janeiro, Brazil); Lino Ferraz (Universidade Federal do Rio de Janeiro & Grupo de Teleinformática e Automação, Brazil); João Vitor Torres (Universidade Federal do Rio de Janeiro & Petróleo Brasileiro SA - Petrobras, Brazil); Diogo Mattos (Universidade Federal do Rio de Janeiro & GTA, Brazil); Andrés Murillo (Federal University of Rio de Janeiro, Brazil); Martin E. Andreoni Lopez (Federal University of Rio de Janeiro & UFRJ, Brazil); Igor Alvarenga (Federal University of Rio de Janeiro, Brazil); Claudia Rodrigues (Federal University of Rio de Janeiro, Brazil); Otto Carlos M. B. Duarte (Universidade Federal do Rio de Janeiro, Brazil)  
pp. 1383-1387

### ***Resource Management Policies for Cloud-based Interactive 3D Applications***

Guido Marchetto (Politecnico di Torino, Italy); Riccardo Sisto (Politecnico di Torino, Italy); Luca Stanziano (Politecnico di Torino, Italy)  
pp. 1388-1392

# ICC'13 WS - Workshop on Networking across disciplines: Communication Networks, Complex Systems and Statistical Physics (NETSTAT)

## NETSTAT-01: Keynote Speaker 1: Marc Mezard

## NETSTAT-02: Statistical Physics Methods in Network Routing, Scheduling and Resource Allocation

### ***Message-Passing Algorithms for Optimal Utilization of Cognitive Radio Networks***

Hamed Mahmoudi Gheydari (Aston University, United Kingdom); Georgios Rodolakis (ITI, CERTH & Informatics and Telematics Institute, Centre for Research and Technology, Hellas, Greece); Leonidas Georgiadis (Aristotle University of Thessaloniki, Greece); David Saad (Aston University, United Kingdom)  
pp. 1393-1397

### ***Entropy-Driven Optimization Dynamics for Gaussian Vector Multiple Access Channels***

Panayotis Mertikopoulos (French National Center for Scientific Research (CNRS) & Laboratoire d'Informatique de Grenoble, France); Aris Moustakas (University of Athens, Greece)  
pp. 1398-1402

### ***A Belief-Propagation Approach for Multicast Scheduling in Input-Queued Switches***

Paolo Giaccone (Politecnico di Torino, Italy); Marco Pretti (CNR - Consiglio Nazionale delle Ricerche, Italy)  
pp. 1403-1408

### ***Non-adaptive pooling strategies for detection of rare faulty items***

Pan Zhang (ESPCI, France); Florent Krzakala (ESPCI, France); Marc Mezard (Universite de Paris Sud Orsay, France); Lenka Zdeborova (Institut de Physique Theorique IPhT, CEA Saclay and CNRS, France)  
pp. 1409-1414

## NETSTAT-03: Keynote Speaker 2: John S. Baras

## NETSTAT-04: Fluctuations, Rare Events and Optimization in Wired and Wireless Communication

### ***Stochastic Optimization of Service Provision with Selfish Users***

Fabrizio Altarelli (Politecnico di Torino, Italy); Alfredo Braunstein (Politecnico di Torino, Italy); Carla-Fabiana Chiasserini (Politecnico di Torino, Italy); Luca Dall'Asta (Politecnico di Torino, Italy); Paolo Giaccone (Politecnico di Torino, Italy); Emilio Leonardi (Politecnico di Torino, Italy); Riccardo Zecchina (Politecnico di Torino, Italy)  
pp. 1415-1419

### ***Efficient Algorithm for Routing Optimization via Statistical Mechanics***

Chi Ho Yeung (Aston University, United Kingdom)  
pp. 1420-1424

### ***Fluctuation-driven traffic congestion in a scale-free model of the Internet***

Igor Yurkevich (Aston University, United Kingdom); Alexander Stepanenko (Aston University, United Kingdom); Costas Constantinou (University of Birmingham, United Kingdom); Igor Lerner (Birmingham University, United Kingdom)  
pp. 1425-1428

### ***Correcting beliefs in the mean-field and Bethe approximations using linear response***

Jack Raymond (University of Rome, La Sapienza, Italy); Federico Ricci-Tersenghi (Universita di Roma, La Sapienza, Italy)  
pp. 1429-1433