2016 IEEE Wireless Communications and Networking Conference Program

Time	Salwa 2	Salwa 1	Salwa 3	Dukhan	PR5	PR6	PR 7	PR 8	Cigar Lounge	Ghazal	Dafna	Dafna Foyer
Monday, April 4												
08:15-09:00	Opening remarks:											
09:00-10:00	KEY 1: *5G Physical Layer and MAC: Opportunities and Challenges*											
10:00-10:30	*Morning Break*											
10:30-12:10	PHY-I1: *Cellular Networks I*	PHY1: *MIMO Detection*	PHY2: *Device to Device Communications*	PHY3: *Estimation and Detection*	MAC 1: *Machine-to-Machine Communications*	MAC 2: *Game Theory for Wireless Networks*	NET1: *Routing and Localization in Vehicular Networks*	NET2: *Heterogeneous Cellular Networks - 2*	APP 1: *Cellular Networks*	APP 2: *Testbeds and Simulators*	PAN 1: *Global Research Funding Opportunities: Models & Lessons Learnt*	NET-P: *Poster Session*
12:10-14:00	*Lunch*											
14:00-15:40	MAC-I1: *MAC Design 1*	PHY4: *Beamforming*	PHY5: *Multiple Access*	PHY6: *Cognitive Radio Networks I*	PHY7: *Energy Harvesting I*	MAC 3: *Cognitive Radio Networks*	NET3: *Localization - 1*	NET4: *Heterogeneous Wireless Networks*	APP 3: *M2M and IoT*	APP 4: *Content Caching and Analytics*	PAN 2: *Increasing Academic and Industrial Competitiveness in a Changing ICT Value Place*	PHY-P1: *Poster Session I - PHY and Fundamentals*
15:40-16:00	*Afternoon Break*											
16:00-17:40	NET-I: *Cloud and Fog Communications in 5G Systems*	PHY8: *Massive MIMO*	PHY9: *Interference Management I*	PHY10: *Cogntive Radio Networks II*	MAC 4: *MAC Design 2*	MAC 5: *Energy Efficiency and Energy Harvesting*	PHY11: *Compressed Sensing*	NET5: *Wireless Sensor Networks - 1*	NET6: *Energy-efficient Communications*	APP 5: *Data Centers and Storage*	PAN 3: *Roadmap to 5G and Beyond: Global Perspectives*	MAC-P: *Poster Session - MAC/Scheduling/Resource Management*
Tuesday, April 5												
09:00-10:00	KEY 2: *Opportunism and Symbiosis in Mobile Cloud Computing: The Promise and the Challenges*											
10:00-10:30	*Morning Break*											
10:30-12:10	PHY-I2: *Interference Management II*	PHY12: *MIMO-OFDM Systems*	PHY13: *Wireless Networks I*	PHY14: *Channel Modeling*	MAC 6: *Energy Efficiency in LTE Networks 1*	MAC 7: *Massive-MIMO Systems*	NET7: *Wireless Sensor Networks - 2*	NET8: *Cognitive Radio Networks*	NET9: *LTE Systems*	APP 6: *Intelligent Transportation Systems*	PAN 4: *The Internet-of-Things (IoT): Challenges and Opportunities*	APP-P: *Poster Session - Advances in Wireless Networks*
12:10-14:00	*Lunch*											
14:00-15:40	MAC-I2: *Energy Efficiency in LTE Networks 2*	PHY15: *MIMO Relaying*	PHY16: *Wireless Networks II*	PHY17: *Cellular Networks II*	PHY18: *Multicarrier Modulation*	MAC 8: *Energy Efficiency in Multihop Networks*	NET10: *Heterogeneous Cellular Networks - 1*	NET11: *Security and Privacy*	NET12: *Resource Allocation and QoS Support*	APP 7: *Wearable Sensing and Applications*	PAN 5: *Connected and Autonomous Vehicles: From Vision to Reality*	PHY-P2: *Poster Session II - PHY and Fundamentals*
15:40-16:00	*Afternoon Break*											
16:00-17:40	APP-I: *Cloud Services*	PHY19: *Physical Layer Security I*	PHY20: *Wireless Networks III*	PHY21: *Relaying and Cooperative Communications I*	MAC 9: *Energy Efficiency in WLAN, WPAN, and Sensor Networks*	PHY22: *Wireless Energy Transfer*	NET13: *LTE/WiFi Coexistence*	NET14: *Localization - 2*	NET15: *Localization and Sensing*	PHY23: *Network Coding and Index Coding*	PAN 6: *Personalized Medicine and Mobile Health: Role of ICT*	

Wednesday, April 6

09:00-10:00	KEY 3: *Resilient Wireless Communications - A Frontier to Be Challenged*											
10:00-10:30	*Morning Break*											
10:30-12:10	PHY-I3: *Energy Harversting II*	PHY24: *Physical Layer Security II*	PHY25: *Selected Topics in Communications I*	PHY26: *Relaying and Cooperative Communications II*	MAC 10: *Spectrum Management and Cognitive Radio*	NET16: *LTE Network Planning and Configuration*	NET17: *Multicast*	NET18: *Network Coding*	NET19: *D2D, UAV, and IOT Systems*	APP 8: *Applications Using Emerging wireless technologies*	PAN 7: *Security Issues & Challenges*	
12:10-14:00	*Lunch*											
14:00-15:40	PHY27: *Relaying and Cooperative Communications III*	PHY28: *Molecular Communications*	PHY29: *mmWave Communications*	PHY30: *Selected Topics in Communications II*	MAC 11: *Energy-Efficient Resource Allocation*	NET20: *Mobility Management in SDNs*	NET21: *Media Streaming in Wireless Networks*	NET22: *Resource Allocation and QoS Support*	NET23: *Cooperative Communications*	APP 9: *Smart Grids and Energy-Aware Protocols for UAV*		
15:40-16:00	*Afternoon Break*											
16:00-17:40	PHY31: *Modulation and Coding*	PHY32: *Space Time Block Codes*	PHY33: *Selected Topics in Communications III*	PHY34: *Spectrum Sensing*	MAC 12: *MAC Design 3*	NET24: *D2D Communications*	NET25: *MIMO and Beamforming*	NET26: *DTNs and Opportunistic Communications*	NET27: *Network Planning and Simulation*	APP 10: *QoE-QoS of Cellular Networks*		

Monday, April 4

Monday, April 4, 09:00 - 10:00

KEY 1: 5G Physical Layer and MAC: Opportunities and Challenges

Dr. R. Valenzuela

Room: Salwa 2

Reinaldo Valenzuela received a Bachelor of Science degree from the University of Chile and a Ph.D. from Imperial College, London. He is currently Director of the Wireless Communications Research Department at Bell Laboratories, and is a Distinguished Member of Technical Staff. Valenzuela has been at the forefront of many recent advances in wireless systems; his research includes propagation measurements and models, MIMO/space time systems achieving high capacities using transmit and receive antenna arrays, HetNets, small cells, and next generation air interface techniques and architectures. The author of more than 185 papers, he has 44 issued patents and more than 22,000 citations in Google Scholar. Valenzuela is a 'Highly Cited Author' in Thomson ISI, a Fulbright Senior Specialist, an IEEE Fellow, a Bell Labs Fellow and a WWRF Fellow. For his pioneering contributions to MIMO technology, he was awarded the 2010 IEEE Eric E. Sumner Award. He is a recipient of the 2015 IEEE VTS Avant Garde Award.

Monday, April 4, 10:30 - 12:10

PHY-I1: Cellular Networks I

Room: Salwa 2

Invited talk: 5G: An Evolution or A Revolution?
Mérouane Debbah (Huawei, France)

LTE Rel-13 MTC Device Receiver Algorithms for Coverage Enhancement
Ashok Kumar Reddy Chavva (Samsung Electronics, India); Sripada Kadambar (Samsung R&D Institute India - Bangalore, India); Venkata Ramana Gurugubelli, Anusha Gunturu and Shubham Khunteta (Samsung Electronics, India)

Non-Feedback Vertical Plane Beamforming for LTE-Advanced Systems
Kenji Hoshino (Softbank Corp., Japan); Teruya Fujii (Vodafone K.K., Japan)

Renewable Energy Management in Cellular Networks: An Online Strategy based on ARIMA Forecasting and a Markov Chain Model
Johann Leithon and Teng Joon Lim (National University of Singapore, Singapore); Sumei Sun (Institute for Infocomm Research, Singapore)

PHY1: MIMO Detection

Room: Salwa 1

Spectral Efficiency of Distributed MIMO Systems with ZF Receivers
Hisham Almelah and Khairi A. Hamdi (University of Manchester, United Kingdom)

Spectral Efficiency of ZF Receivers over MIMO Channels with Out-of-Cell Interference
Hisham Almelah and Khairi A. Hamdi (University of Manchester, United Kingdom)

Soft Iterative Detector and Semi-Blind Identification for LDPC-Coded MIMO Systems in Dispersive Fading Channels
Yantao Qiao and Weidong Xiang (University of Michigan, Dearborn, USA); Xiaoyu Yin (Shanghai University, P.R. China); Lina Xu (Technische Universität München, Germany)

Low-Complexity Joint Modulation Classification and Detection in MU-MIMO
Hadi Sarieddeen and Mohammad Mansour (American University of Beirut, Lebanon); Louay

Jalloul (Qualcomm Inc., USA); Ali Chehab (American University of Beirut, Lebanon)

Detection Issues with Many BS Antennas Available for Bandwidth-Efficient Uplink Transmission in a MU-MIMO System
Paulo Torres (Instituto Politecnico de Castelo Branco, Portugal); António Gusmao (Instituto Superior Técnico, Portugal)

PHY2: Device to Device Communications

Room: Salwa 3

FREDDY: A Framework for VANET aided D2D Discovery
Hussein Chour, Youssef Nasser, Hassan A. Artail and Alaa Kachouh (American University of Beirut, Lebanon)

Resource Allocation for Device-to-Device and Small Cell Uplink Communication Networks
Haibo Dai, Yongming Huang, Chunguo Li, Kang Song and Luxi Yang (Southeast University, P.R. China)

Mobility Impact on Mode Selection Map in D2D Networks - An Analytical Approach
Armin Morattab (Ecole de Technologie Supérieure, University of Quebec, Canada); Zbigniew Dziong (École de technologie supérieure, University of Quebec, Canada); Kazem Sohraby (South Dakota School of Mines and Technology, USA); MD. Habul Islam (Southern Alberta Institute of Technology, Canada)

On the Analysis of Device-to-Device Overlaid Cellular Networks in the Uplink under 3GPP Propagation Model
Asma Afzal and Syed Ali Raza Zaidi (University of Leeds, United Kingdom); Desmond McLernon (The University of Leeds, United Kingdom); Mounir Ghogho (University of Leeds & International University of Rabat, United Kingdom)

Energy Costs for Traffic Offloading by Cache-enabled D2D Communications
Binqiang Chen and Chenyang Yang (Beihang University, P.R. China)

PHY3: Estimation and Detection

Room: Dukhan

Low Complexity Norm-Adaption Least Mean Square/Fourth Algorithm and Its Applications for Sparse Channel Estimation
Yingsong Li, Yanyan Wang and Tao Jiang (Harbin Engineering University, P.R. China)

Parameter Estimation of Inverse Gaussian Channel for Diffusion-Based Molecular Communication
Lin Lin, Chengfeng Yang and Shiwei Ma (Shanghai University, P.R. China); Maode Ma (Nanyang Technological University, Singapore)

Maximum Likelihood Estimator for the alpha-kappa-mu Fading Environment
Fernando Batista (Inatel, Brazil); Rausley Adriano Amaral de Souza (National Institute of Telecommunications (INATEL), Brazil); Antonio Marcelo Oliveira Ribeiro (University of Campinas, Brazil)

Massive MIMO Channel Estimation Based on Block Iterative Support Detection
Wenqian Shen and Linglong Dai (Tsinghua University, P.R. China); Yi Shi (Huawei Technologies, P.R. China); Zhen Gao and Zhaocheng Wang (Tsinghua University, P.R. China)

Beam-blocked Compressive Channel Estimation for FDD Massive MIMO Systems
Wei Huang (Southeast University, P.R. China); Zhaohua Lu (ZTE Corporation, P.R. China); Cheng Zhang, Yongming Huang, Shi Jin and Luxi Yang (Southeast University, P.R. China)

MAC 1: Machine-to-Machine Communications

Room: PR5

Spectrum sharing for M2M applications through Whitetime exploitation in WiFi networks
John Harris (University of Bristol, United Kingdom)

An Improved Random Access Procedure for M2M Communications
Ningbo Zhang (Beijing University of Posts and Telecommunications & Science and Technology on Information Transmission and Dissemination in Communication Networks Lab, P.R. China)

Efficiency analysis of M2M Data Collection networks using Multipacket Reception in Frame-Slotted ALOHA
Arun George and Venkatesh Tiruchirai Gopalakrishnan (Indian Institute of Technology Madras, India)

Clustering and Radio Resource Partitioning for Machine-Type Communications in Cellular Networks
Utku Tefek and Teng Joon Lim (National University of Singapore, Singapore)

Time Aware Closed Form Frame Slotted ALOHA Frame Length Optimization
Hazem A. Ahmed (Friedrich-Alexander-Universität Erlangen-Nürnberg & Fraunhofer Institute for Integrated Circuits, Germany); Hamed Salah (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Joerg Robert (Friedrich-Alexander Universität Erlangen-Nürnberg, Germany); Albert Heuberger (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)

MAC 2: Game Theory for Wireless Networks

Room: PR6

Gale-Shapley-Algorithm Based Resource Allocation Scheme for Device-to-Device Communications Underlaying Downlink Cellular Networks
Wenson Chang, You-Ting Jau and Szu-Lin Su (National Cheng Kung University, Taiwan); Yinman Lee (National Chi Nan University, Taiwan)

On Modeling Channel Selection in LTE-U as a Repeated Game
Jordi Pérez-Romero (Universitat Politècnica de Catalunya (UPC), Spain); Oriol Sallent (Universitat Politècnica de Catalunya, Spain); Hamed Ahmadi (University College Dublin, Ireland); Irene Macaluso (Trinity College Dublin, Ireland)

Joint Cost-Sharing and Multi-Relay Selection for Two-Way Relay Networks using a Pricing Game
Mohammed S. Bahbahani (University of Manchester, United Kingdom); Emad Alsusa (Manchester University, United Kingdom)

Relay Selection for Energy Harvesting Relay Networks using a Repeated Game
Mohammed S. Bahbahani (University of Manchester, United Kingdom); Emad Alsusa (Manchester University, United Kingdom)

Information Credibility Equilibrium of Cooperative Networks
Chunxiao Jiang (Tsinghua University, Beijing, P.R. China); Zhu Han (University of Houston, USA); Yong Ren (Tsinghua University, Beijing, P.R. China); Lajos Hanzo (University of Southampton, United Kingdom)

NET1: Routing and Localization in Vehicular Networks

Room: PR 7

An Intersection UAV-Assisted VANET Routing Protocol
Omar Sami Oubbati (University of Laghouat, Algeria); Abderrahmane Lakas (UAE University,

UAE); Nasreddine Lagraa (Amar Thelidji University, Laghouat & LIM Laboratory, Algeria); Mohamed Bachir Yagoubi (University of Laghouat, Algeria)

An Enhanced Directional Greedy Forwarding for VANETs using Link Quality Estimation
Ohoud Alzamzami and Imad Mahgoub (Florida Atlantic University, USA)

Mobility Data Verification For Vehicle Localization in Vehicular Ad Hoc Networks
Lina Altoaimy and Imad Mahgoub (Florida Atlantic University, USA)

VALS: Vehicle-Aided Location Service in Urban Environment
Raik Aissaoui (Qatar University, Qatar); Amine Dhraief (University of Manouba, Tunisia); Abdelfettah Belghith (University of Manouba & National School of Computer Sciences ENSI, Tunisia); Hamid Menouar (Qatar Mobility Innovations Center, Qatar); Fethi Filali (QMIC, Qatar); Hassan Mathkour (King Saud University, Saudi Arabia)

The Minimum Delay Relay Optimization Based on Nakagami Distribution for Safety Message Broadcasting in Urban VANET
Wenjie Wang and Tao Luo (Beijing University of Posts and Telecommunications, P.R. China)

NET2: Heterogeneous Cellular Networks - 2

Room: PR 8

Maximum Weight Matching based Heuristic for Future HetNets Greening
Hocine Ameur (University of Technology of Troyes, France); Moez Esseghir (Technology University of Troyes & Charles Delaunay Institute, France); Lyes Khoukhi (University of Technology of Troyes, France)

Load-aware Handover Decision Algorithm in Next-generation HetNets
Konstantinos Alexandris and Nikolaos Sapountzis (EURECOM, France); Navid Nikaein (Eurecom, France); Thrasyvoulos Spyropoulos (EURECOM, France)

Low-Complexity and Low-Feedback-Rate Channel Allocation for Carrier Aggregation in Heterogeneous Networks
Apostolos Galanopoulos (University of Thessaly & Industrial Systems Institute, Greece); Christos G. Tsinos (University of Luxembourg, Greece); Fotis Foukalas (Athena Research and Innovation Centre, Greece)

Efficient Load-Aware Vertical Handoff for HetNet with Poisson-Point-Process Distributed Traffics
Wenson Chang and Heng-Tien Wu (National Cheng Kung University, Taiwan); Yinman Lee (National Chi Nan University, Taiwan); Szu-Lin Su (National Cheng Kung University, Taiwan)

Mobility Prediction based Seamless RAN-Cache Handover in HetNet
Hongjia Li (Chinese Academy of Sciences, P.R. China); Dan Hu (Cisco Systems, Inc., P.R. China)

APP 1: Cellular Networks

Room: Cigar Lounge

SDN-based Optimal Traffic Engineering for Cellular Networks with Service Chaining
Rung-Hung Gau and Pei-Kan Tsai (National Chiao Tung University, Taiwan)

Performance Evaluation for LTE Applications with Buffer Awareness Consideration
Muntadher Alshaikh Ali (University of New Haven, USA); Amir Esmailpour (University of New Haven & Ryerson University, USA); Nidal Nasser (Alfaisal University, Saudi Arabia)

Intelligent Battery Management for Cellular Networks with Hybrid Energy Supplies
Xilong Liu (New Jersey Institute of Technology, USA); Tao Han (University of North Carolina at Charlotte, USA); Nirwan Ansari (New Jersey Institute of Technology, USA)

Cell Search Evaluation: A Step Towards the Next Generation LTE-MTC Systems
Abdelmohsen Ali and Walaa Hamouda (Concordia University, Canada)

Analysis of Discovery and Access Procedure for D2D Communication in 5G Cellular Network
Zhijian Lin and Liang Du (Xiamen University, P.R. China); Zhibin Gao (Xiamen University Xiamen, P.R. China); Lianfen Huang (XiaMen University, P.R. China); Xiaojiang Du (Temple University, USA); Mohsen Guizani (QU, USA)

APP 2: Testbeds and Simulators

Room: Ghazal

SAROS: A Social-Aware Opportunistic Forwarding Simulator
Soumaia A. Al Ayyat (The American University in Cairo, Egypt); Sherif Aly (American University in cairo, Egypt); Khaled A. Harras (Carnegie Mellon University, USA)

Genetic Algorithm-based Mapper to Support Multiple Concurrent Users on Wireless Testbeds
Yaser A. Elnakieb (Virginia Tech, Egypt); Michael Azmy (Faculty of Engineering, Alexandria University, Egypt); Mustafa El-Nainay (Alexandria University & Virginia Tech, Egypt)

A Sensor Cloud Test-bed for Multi-Model and Multi-User Sensor Applications
Sanjay Madria (Missouri University of Science and Technology, USA)

Building Virtual 802.11 Testbeds Towards Open 5G Experimentation
Konstantinos Kousias (University of Thessaly, Greece); Kostas Katsalis (EURECOM & University of Thessaly, France); Donatos Stavropoulos (University of Thessaly, Greece); Thanasis Korakis (New York University, USA); Leandros Tassiulas (Yale University, USA)

Setting up an extended perception in a vehicular network environment: A proof of concept
Nader Chaabouni and Abdelhakim Hafid (University of Montreal, Canada); Jihene Rezgui (College Maisonneuve, Canada); Soumaya Cherkaoui (Université de Sherbrooke, Canada)

PAN 1: Global Research Funding Opportunities: Models & Lessons Learnt

Room: Dafna

•Dr. Abdul Sattar Al-Taie, Executive Director, Qatar National Research Fund (QNRF), Qatar.•Dr. AbdulAziz AlSwailem, Vice President For Scientific Research and Support, King Abdulaziz City for Science and Technology (KACST), Riyadh, Saudi Arabia.•Dr. Chengshan Xiao, Program Director, ECCS division, NSF, USA.•Dr. Ajit K Chaturvedi, Deputy Director, IIT Kanpur, India.

NET-P: Poster Session

Room: Dafna Foyer

An Efficient Multi-channel Reader Collision Avoidance Protocol in RFID Systems
Yi Jiang (Northwestern Polytechnical University & School of Electronics and Information, P.R. China); Ruonan Zhang, Wei Cheng and Wei Sun (Northwestern Polytechnical University, P.R. China)

A Hybrid Random Access Method for Smart Meters on LTE Networks
Chalakorn Karupongsiri (The University of Sydney, Australia); Kumudu S Munasinghe (University of Canberra, Australia); Abbas Jamalipour (University of Sydney, Australia)

Performance Modeling of Camera-assisted Proactive Base Station Selection for Human Blockage Problem in mmWave Communications
Yuta Oguma (Kyoto University & Graduate School of Informatics, Japan); Takayuki Nishio,

Koji Yamamoto and Masahiro Morikura (Kyoto University, Japan)

Single-View Bistatic Sparse Reconstruction in TWRI Exploiting Ghost's Aspect Dependence Feature
Abdi T Abdalla (King Fahd University of Petroleum and Minerals, Saudi Arabia); Ali H Muqaibel (KFUPM, Saudi Arabia)

Study of the electromagnetic scattering by large obstacle based on the Method of Auxiliary Sources
Sami Hidouri (National Engineering School of Tunis, Tunisia)

Monday, April 4, 14:00 - 15:40

MAC-I1: MAC Design 1

Room: Salwa 2

Invited Talk: Ad Hoc MACs: Why and How
Jean Walrand (University of California, Berkeley, USA)

An Optimal Link and Rate Combination Search Algorithm for STDMA MAC Protocols
Siqian Cui (Harbin Institute of Technology & University of California, Irvine, P.R. China); Homayoun Yousefi'zadeh (University of California, Irvine, USA); Xuemai Gu (Harbin Institute of Technology, P.R. China)

DTMC Modeling for Performance Evaluation of DW-MAC in Wireless Sensor Networks
Lakshmikanth Guntupalli and Frank Y. Li (University of Agder, Norway)

S-CW FD: A MAC Protocol for Full-Duplex in Wireless Local Area Networks
Deniz Marlali and Ozgur Gurbuz (Sabanci University, Turkey)

PHY4: Beamforming

Room: Salwa 1

Distributed Collaborative Beamforming Design in Highly-Scattered Environments
Slim Zaidi (University of Quebec, INRS-EMT, Canada); Bouthaina Hmidet (INRS, Canada); Sofiene Affes (INRS-EMT, Canada)

Energy Efficient Transmit Beamforming Under Queueing Stability Constraints
Amira Akra and Mohamad Assaad (CentraleSupelec, France)

Capacity Analysis for MIMO Beamforming Based Cooperative Systems over Time-Selective Links with Full SNR/One-Bit feedback based Path Selection and Imperfect CSI
Neeraj Varshney and Aditya K Jagannatham (Indian Institute of Technology Kanpur, India)

Efficient Combination of Multi-User MIMO THP and User Selection Based on Spatial Orthogonality
Tomoki Maruko and Takahiro Yamaguchi (Waseda University, Japan); Tomoki Yoshimura, Hiromichi Tomeba and Takashi Onodera (Sharp Corporation, Japan); Fumiaki Maehara (Waseda University, Japan)

Precoder Design for a Three-Input Multiple-Output Spatial Multiplexing System with Noncoherent Reception
R. K. Mallik (Indian Institute of Technology - Delhi, India); Ross Murch (HKUST, Hong Kong)

PHY5: Multiple Access

Room: Salwa 3

AMC and HARQ: Effective capacity analysis
Redouane Sassioui (INRS, Canada); Leszek Szczecinski (INRS-EMT, Canada); Long Bao Le (INRS, University of Quebec, Canada); Mustapha Benjillali (INPT, Morocco)

Joint Coding/Decoding for Multi-message HARQ
Abdellatif Benyouss (INRS-EMT, Canada); Mohammed Jabi (Institut National de la Recherche Scientifique, Canada); Mael Le Treust (ETIS / ENSEA, Université Cergy-Pontoise, CNRS, France); Leszek Szczecinski (INRS-EMT, Canada)

Enhanced Listen-Before-Talk Mechanism for Licensed Assisted Access in Unlicensed Spectrum
Liu Liu (DOCOMO Beijing Communications Laboratories Co., Ltd, P.R. China); Yu Jiang (DoCoMo Beijing Labs, P.R. China); Hiroki Harada (NTT DoCoMo, Inc., Japan); Huiling Jiang (DOCOMO Beijing Communications Laboratories Co., Ltd., P.R. China)

Performance Degradation of Distributed Cooperative Systems Due to Hidden Nodes
Tarla Abadi and Khairi A. Hamdi (University of Manchester, United Kingdom)

Role of Large Scale Channel Information on Predictive Resource Allocation
Chuting Yao and Chenyang Yang (Beihang University, P.R. China)

PHY6: Cognitive Radio Networks I

Room: Dukhan

On Throughput and Quality of Experience in Cognitive Radio Networks
Hung Tran (Malardalen University, Sweden); Hans-Juergen Zepernick (Blekinge Institute of Technology, Sweden); Hoc Phan (University of Reading, United Kingdom)

Optimal Energy-efficient Power Allocation For Asynchronous Cognitive Radio Networks using FBMC/OFDM
Juwendo Denis, Mylene Pischella and Didier Le Ruyet (CNAM, France)

Achieving Energy Fairness in Multiuser Uplink CR Transmission
Zain Ali (COMSATS Institute of Information Technology, Islamabad, Pakistan); Guftaar Ahmad Sardar Sidhu (Jacobs University Bremen, Germany); Muhammad Waqas (COMSATS Institute of Information Technology, Islamabad, Pakistan); Feifei Gao (Tsinghua University, P.R. China); Shi Jin (Southeast University, P.R. China)

An Efficient Switching Threshold-Based Scheduling Protocol for Multiuser Cognitive AF Relay Networks
Anas M. Salhab (King Fahd University of Petroleum & Minerals, Saudi Arabia); Salam A. Zummo (KFUPM, Saudi Arabia)

Underlay Cognitive Radio: What Is the Impact of Carrier Aggregation and Relaying on Throughput?
Panagiotis D. Diamantoulakis and Koralia N. Pappi (Aristotle University of Thessaloniki, Greece); Sami Muhaidat (Khalifa University, UAE); George K. Karagiannidis (Aristotle University of Thessaloniki, Greece); Tamer Khattab (Qatar University, Qatar)

PHY7: Energy Harvesting I

Room: PR5

Energy Harvesting Relay Systems in Mixed Rician and Rayleigh Fading: The Effects of LOS Path Component
Haiyang Ding (State Key Lab. of ISN, Xidian University & Xi'an Communication Institute, P.R. China); Daniel Benevides da Costa (Federal University of Ceara (UFC) & Area: Telecommunications, Brazil); Xiaodong Wang (Columbia University, USA); Ugo Dias and Rafael

Timoteo de Sousa Junior (University of Brasilia, Brazil); Jianhua Ge (Xidian University, P.R. China)

Error Probability Analysis of Energy Harvesting Relay-aided Cooperative Network Using Hierarchical Modulation
Reza Shakeri (Qatar University, Iran); Tamer Khattab (Qatar University, Qatar)

ARQ with Adaptive Feedback for Energy Harvesting Receivers
Yuyi Mao (Hong Kong University of Science and Technology, Hong Kong); Jun Zhang and Khaled B. Letaief (The Hong Kong University of Science and Technology, Hong Kong)

Optimized Collaborative Spectrum Sensing in Energy Harvesting Cognitive Radio Networks
Mohammad Hassan Adeli (Imam Khomeini International University, Iran); Fariba Mohammadian (Qazvin International University, Iran); Abbas Taherpour (Imam Khomeini International University, Iran); Tamer Khattab (Qatar University, Qatar)

Energy Efficient Power Allocation for Carrier Aggregation Enabled Communications Systems
George A Ropokis (CONNECT, Trinity College Dublin, Ireland); Fotis Foukalas (Athena Research and Innovation Centre, Greece)

MAC 3: Cognitive Radio Networks

Room: PR6

Spectrum Decision for Cognitive Radio Networks With Various-Bandwidth Channels
Samer T. Talat (Industrial Technology Research Institute, Taiwan); Chung-Wei Wang and Li-Chun Wang (National Chiao Tung University, Taiwan)

Interference minimization based power allocation for Cognitive radio networks with imperfect spectrum sensing
Yongjun Xu (Chongqing University of Posts and Telecommunications & Chongqing Key Laboratory of Mobile Communication Technology, P.R. China); Xiaohui Zhao (University of Jilin & College of Communication Engineering, P.R. China); Fengye Hu (Jilin University, P.R. China)

Novel Cooperative Policy For Cognitive Radio Networks: Stability Region and Delay Analysis
Mohamed Salman (University of Colorado Boulder, USA); Amr El-Keyi (Carleton University, Canada); Mohammed Nafie (Cairo University & Nile University, Egypt); Mazen Omar Hasna (Qatar University, Qatar)

Exploiting Group Structure in MAC Protocol Design for Multichannel Ad Hoc Cognitive Radio Networks
Sachin Kadam (Indian Institute of Technology Bombay, India); Devika Prabhu (IIM Lucknow, India); Nitish Rathi (Indian Institute of Management Kozhikode, India); Prakash Chaki (NEC Corporation, Japan); Gaurav S. Kasbekar (Indian Institute of Technology, Bombay, India)

On Optimizing Cooperative Cognitive User Performance under Primary QoS Constraints
Adel M. Elmahdy (Nile University, Egypt); Amr El-Keyi (Carleton University, Canada); Tamer ElBatt (Faculty of Engineering, Cairo University & WINC, Nile University, Egypt); Karim G Seddik (American University in Cairo, Egypt)

NET3: Localization - 1

Room: PR 7

BLE-based Collaborative Indoor Localization with Adaptive Multi-lateration and Mobile Encountering
Jun-Wei (Chun-Wei) Qiu (Chiou), Chien-Pu Lin and Yu-Chee Tseng (National Chiao-Tung

University, Taiwan)

Standardizing Location Fingerprints Across Heterogeneous Mobile Devices for Indoor Localization
Han Zou (Nanyang Technological University, Singapore); Baoqi Huang (Inner Mongolia University, P.R. China); Xiaoxuan Lu (University of Oxford, United Kingdom); Hao Jiang (Nanyang Technological University, Singapore); Lihua Xie (University of Nanyang Technological University, Singapore)

Convex Hull based Node Selection NLoS mitigation for Indoor Localization
Stephen Lingfeng Wang and Yuechuan Zhang (Toshiba Research Europe Limited, United Kingdom)

EveTrack: An Event Localization and Tracking Scheme for WSNs in Dynamic Environments
Kamran Ali (Michigan State University, USA); Ijaz Haider Naqvi (LUMS School of Science and Engineering (SSE) & LUMS SSE, Pakistan)

RSS Based Localization in Rayleigh Fading Environment
Rojina Adhikary and John N. Daigle (University of Mississippi, USA)

NET4: Heterogeneous Wireless Networks

Room: PR 8

An MDP-based Vertical Handoff Decision Algorithm for Heterogeneous Wireless Networks
Lin Chen and Hui Li (University of Science and Technology of China, P.R. China)

Energy Efficient BSs Switching in Heterogeneous Networks: An Operator's Perspective
Jinwei He (China Mobile Research Institute, P.R. China); Chao Xu (Xidian University, P.R. China); Sen Bian and Zecai Shao (China Mobile Research Institute, P.R. China); Jiongjiong Song and Yufei Li (Xidian University, P.R. China); Chih-Lin I (China Mobile Research Institute, P.R. China)

Jitter-Aware Packet Scheduler for Concurrent Multipath Transmission in Heterogeneous Wireless Networks
Min-Cheng Chan (National Chiao Tung University, USA); Chien-Chao Tseng (National Chiao-Tung University, Taiwan); Li-Hsing Yen (National Chiao Tung University, Taiwan)

A Systematic Node Placement Strategy for Multi-Tier Heterogeneous Network Graphs
Kai Ding (University of California at Irvine, USA); Homayoun Yousefi'zadeh (University of California, Irvine, USA)

Forming a Cluster-Mesh Topology to Boost Base-Station Anonymity in Wireless Sensor Networks
Sami Alsemairi and Mohamed Younis (University of Maryland Baltimore County, USA)

APP 3: M2M and IoT

Room: Cigar Lounge

Evaluating Bluetooth Low Energy in Realistic Wireless Environments
Mohamad Omar Al Kalaa and Walid Balid (University of Oklahoma, USA); Naim Bitar (The University of Oklahoma, USA); Hazem Refai (Oklahoma University, USA)

QoS Estimation and Selection of CSP in Oligopoly Environment for Internet of Things
Subarna Chatterjee (Indian Institute of Technology Kharagpur, India); Sudip Misra (Indian Institute of Technology-Kharagpur, India)

Leveraging Solution-Specific Gateways for Cost-Effective and Fault-Tolerant IoT Networking

Abhimithra Karthikeya Surabhi, Vijeth J Kotagi and Siva Ram Murthy (IIT Madras, India)

An efficient D2D-based strategies for Machine Type Communications in 5G mobile systems

Miloud Bagaa (Aalto University, Finland); Adlen Ksentini (University of Rennes 1 / IRISA Lab, France); Tarik Taleb (Aalto University, Finland); Riku Jäntti (Aalto University School of Electrical Engineering, Finland); Ali Chelli (Norwegian University of Science and Technology (NTNU), Norway); Ilangko Balasingham (Norwegian University of Science & Technology & Oslo University Hospital, Norway)

Utilizing VIN for Improved Vehicular Sensing

Najah A. Abu Ali (UAEU, UAE); Mervat Abu-Elkheir (Mansoura University, Egypt)

APP 4: Content Caching and Analytics

Room: Ghazal

Student/Supervisor Collaboration and Usage Patterns of Publications Available on ResearchGate

Zahra Hammook, Jelena Mišić and Vojislav B. Mišić (Ryerson University, Canada)

Factor Graph based Multi-source Data Fusion for Wireless Localization

Wanlong Zhao, Weixiao Meng, Yonggang Chi and Shuai Han (Harbin Institute of Technology, P.R. China)

Feasibility Analysis and Self-organizing Algorithm for RAN Cooperative Caching

Zejue Wang and Hongjia Li (Chinese Academy of Sciences, P.R. China); Chang Yang (Institute of Information Engineering, Chinese Academy of Science, P.R. China)

Learning Automaton based Distributed Caching for Mobile Social Networks

Chuan Ma (The University of Sydney, Australia); Zihuai Lin, Loris Marini, Jun Li and Branka Vucetic (University of Sydney, Australia)

PAN 2: Increasing Academic and Industrial Competitiveness in a Changing ICT Value Place

Room: Dafna

•Dr. Neeli Rashmi Prasad, Chief Technology Architect of SPA Solutions, San Francisco, USA. Associate Professor and Director of CTIF-USA, Princeton, NJ, USA.•Mr. Lars Kierkegaard, Head of Strategy & Business Development at Teracom A/S, Copenhagen, Denmark.•Dr. Vladimir Poulkov, Professor, Technical University of Sofia and Head of Bulgarian Telecommunications Cluster, Bulgaria

PHY-P1: Poster Session I - PHY and Fundamentals

Room: Dafna Foyer

Throughput Performance Models for Adaptive Modulation and Coding under Fading Channels

Miguel López-Benítez (University of Liverpool, United Kingdom)

Lossy Transmission of Correlated Sources in a Multiple Access Quasi-Static Fading Channel

Antonios Argyriou (University of Thessaly, Greece); Ozgu Alay (Simula Research Laboratory, Norway)

High Fidelity DSRC Receiver Model for ns-3 Simulation Using Large-scale Field Data

S M Osman Gani, Amin Tahmasbi-Sarvestani, Mohammad Fanaei and Yaser P. Fallah (West Virginia University, USA)

Performance of Two-Way Overlay Spectrum Sharing Systems in the Presence of Co-

Channel Interference
Pankaj Kumar Sharma and Prabhat Kumar Upadhyay (Indian Institute of Technology Indore, India)

Transparent operation of kronecker product based full dimension MIMO to exploit 2D antenna array
Suryong Jeong, Keonkook Lee, Taeyoung Kim and Ji-Yun Seol (Samsung Electronics, Korea); Young-Han Nam (Samsung Research America, USA); Md Saifur Rahman (Samsung Research America - Dallas & Samsung Information Systems America, USA)

Monday, April 4, 16:00 - 17:40

NET-I: Cloud and Fog Communications in 5G Systems

Room: Salwa 2

Invited talk: Fog Networking for 5G and IoT
Mung Chiang (Princeton University, USA)

Evaluation of Adaptive Active Set Management for Multi-connectivity in Intra-frequency 5G Networks
Fasil Tesema (Nokia Bell Labs & Technical University of Dresden, Germany); Ahmad Awada (Nokia Bell Labs, Germany); Ingo Viering (Nomor Research GmbH, Germany); Meryem Simsek and Gerhard Fettweis (Technische Universität Dresden, Germany)

Load-Aware Dynamic RRH Assignment in Cloud Radio Access Networks
Debashisha Mishra and Amogh PC (Indian Institute of Technology Hyderabad, India); Arun Ramamurthy, Antony Franklin A and Bheemarjuna Reddy Tamma (IIT Hyderabad, India)

Parallel Opportunistic Routing in IoT Networks
Fateh Singh (Indian Institute of Technology Madras, India); Vijeth J Kotagi and Siva Ram Murthy (IIT Madras, India)

PHY8: Massive MIMO

Room: Salwa 1

Performance Analysis of Downlink MMSE Beamforming Training in TDD MU-Massive-MIMO
Kaifeng Guo (RWTH Aachen University & Institute for Communication Technologies and Embedded Systems, Germany); Behnam Khodapanah and Gerd H. Ascheid (RWTH Aachen University, Germany)

Resource Allocation for Licensed/Unlicensed Carrier Aggregation MIMO Systems
Christos G. Tsinos (University of Luxembourg, Greece); Fotis Foukalas (Athena Research and Innovation Centre, Greece); Theodoros Tsiftsis (Nazarbayev University & Technological Educational Institute of Central Greece, Kazakhstan)

A CMDP-based Approach for Energy Efficient Power Allocation in Massive MIMO Systems
Peng Li and Yanxiang Jiang (Southeast University, P.R. China); Wei Li (Xi'an Jiaotong University & University of Maryland, P.R. China); Fu-Chun Zheng (The University of Reading, United Kingdom); Xiaohu You (National Mobile communication Research Lab., Southeast University, P.R. China)

Identifying the Maximum DoF Region in the Three-cell Compounded MIMO Network
Galymzhan Nauryzbayev (University of Manchester, United Kingdom); Emad Alsusa (Manchester University, United Kingdom)

Progressive Channel State Information for Advanced Multi-User MIMO in Next Generation Cellular Systems

Masoud Sajadieh (Intel Corporation, USA); Ali Esswie (Huawei Network Performance Group, Egypt); Abdurrahman Fouda (Axxcelera Broadband Wireless, Egypt); Hooman Shirani-Mehr and Debdeep Chatterjee (Intel Corporation, USA)

PHY9: Interference Management I

Room: Salwa 3

Low Complexity Opportunistic Interference Alignment in K-Transmitter MIMO Interference Channels
Atul Kumar Sinha and Ajit K. Chaturvedi (Indian Institute of Technology Kanpur, India)

Performance of Strong Interference Cancellation in flexible UL/DL TDD Systems using Coordinated Muting, Scheduling and Rate Allocation
Anna Lukowa and Venkatkumar Venkatasubramanian (Nokia Networks - Research, Poland)

SNR Aware Heterogeneous Blind Interference Alignment in MISO Broadcasting Channel
Qing Yang (Beijing University of Posts and Telecommunications, P.R. China); Ting Jiang (Beijing University of Posts & Telecommunications, P.R. China); Zheng Zhou (Beijing University of Posts and Telecommunications, P.R. China)

Performance Analysis of Full-Duplex Multiuser Decode-and-Forward Relay Networks with Interference Management
Aymen Omri (Qatar University, Qatar); Alireza S. Behbahani and Ahmed M. Eltawil (University of California, Irvine, USA); Mazen Omar Hasna (Qatar University, Qatar)

A Two Stage PAPR Reduction Technique for The Uplink of LTE-Advanced with Carrier Aggregation
Abdel-karim Ajami (American University of Beirut (AUB), Lebanon); Hassan A. Artail (American University of Beirut, Lebanon)

PHY10: Cogntive Radio Networks II

Room: Dukhan

Resource Allocation with SIC under Statistical CSI in Multi-carrier based Cognitive Radio Networks
Marwa Chami, Mylene Pischella and Didier Le Ruyet (CNAM, France)

Exact Outage Performance of the SIMO Cognitive Cooperative Network in the Presence of Co-Channel Interference
Jamal A Hussein (Newcastle University, United Kingdom); Salama Said Ikki (Lakehead University & Electrical Engineering Department, Canada); Said Boussakta and Charalampos C. Tsimenidis (Newcastle University, United Kingdom)

Dynamic Spectrum Allocation for Heterogeneous Cognitive Radio Network
Wenjie Zhang (Minnan Normal University, P.R. China); Lei Deng (The Chinese University of Hong Kong, Hong Kong); Chai Kiat Yeo (Nanyang Technological University, Singapore)

Hybrid Digital-Analog Coding Scheme for Overlay Cognitive Radio Network with Correlated Sources
Wenbo Xu, Yifan Wang, Wenbo Guo and Jiaru Lin (Beijing University of Posts and Telecommunications, P.R. China)

Machine Learning Techniques with Probability Vector for Cooperative Spectrum Sensing in Cognitive Radio Networks
Yingqi Lu (University of Calgary, Canada); Pai Zhu (Carnegie Mellon University, USA); Donglin Wang (New York Institute of Technology, USA); Michel Fattouche (University of Calgary, Canada)

MAC 4: MAC Design 2

Room: PR5

Resilient Misbehaviour Detection MAC Protocol (MD-MAC) for Distributed Wireless Networks
Chaminda Alocious, Hannan Xiao and Bruce Christianson (University of Hertfordshire, United Kingdom)

MMSMAC: A Multi-mode Medium Access Control Protocol for Wireless Sensor Networks
Guerroumi Mohamed (University of USTHB, Algeria); Abdelouahid Derhab (King Saud University, Saudi Arabia); Al-Sakib Khan Pathan (Islamic University in Madinah, Saudi Arabia); Nadjib Badache (University of Sciences and Technology Houari Boumediane (USTHB), Algeria); Samira Moussaoui (USTHB, Algeria)

Distance-alignment Based Adaptive MAC Protocol for Underwater Acoustic Networks
Shuchao Jiang, Feng Liu and Shengming Jiang (Shanghai Maritime University, P.R. China)

CF-MAC: A Collision-Free MAC Protocol for UAVs Ad-Hoc Networks
Anzhou Jiang and Zhichao Mi (PLA University of Science and Technology, P.R. China); Chao Dong (College of Communication Engineering, P. L. A University of Science and Technology, P.R. China); Hai Wang (PLA University of Science and Technology, P.R. China)

A Generic Framework for Heterogeneous Wireless Network Virtualization: Virtual MAC Design
Bo Fan (Beijing University of Posts and Telecommunications, P.R. China); Hui Tian (Beijng university of posts and telecommunications, P.R. China); Xiao Yan (Beijing University of Posts and Telecommunications, P.R. China)

MAC 5: Energy Efficiency and Energy Harvesting

Room: PR6

Energy Harvesting Wireless Networks with Correlated Energy Sources
Mehdi Salehi Heydar Abad (University of Sabanci, Turkey); Deniz Gündüz (Imperial College London, United Kingdom); Ozgur Ercetin (Sabanci University, Turkey)

Integrating Energy Harvesting and Dynamic Spectrum Allocation in Cognitive Radio Networks
Ayman Sabbah (Queen's University, Canada); Mohamed Ibnkahla (Carleton University, Canada)

Delay-optimal Data Transmission in Renewable Energy Aided Cognitive Radio Networks
Tian Zhang (Shandong Normal University, P.R. China); Wei Chen (Tsinghua University, P.R. China)

User Association in Massive MIMO and mmWave Enabled HetNets Powered by Renewable Energy
Bingyu Xu and Yue Chen (Queen Mary University of London, United Kingdom); Maged Elkashlan (Queen Mary, University of London, United Kingdom); Tiankui Zhang (Beijing University of Posts and Telecommunications, P.R. China); Kai Kit Wong (University College London, United Kingdom)

Green Energy Aware User Association in Heterogeneous Networks
Qiang Fan and Nirwan Ansari (New Jersey Institute of Technology, USA)

PHY11: Compressed Sensing

Room: PR 7

Compressive Sensing Based NBI Mitigation in UWB Systems in the Presence of Multiuser Interference
Saleh Alawsh and Ali H Muqaibel (KFUPM, Saudi Arabia)

A Compressive Channel Sensing Method with Optimal Thresholding for OFDM Systems under Fast Fading Channels
Da Fu (Beijing University of Posts and Telecommunications, P.R. China); Yuexing Peng (Beijing University of Posts & Telecoms, P.R. China); Senyao Zheng (Beijing University of Posts and Telecommunications, P.R. China)

Mitigation of Narrow-band Interference in Two-Way AF-OFDM Relaying Systems Using Compressive Sensing
Hanan Al-Tous and Imad Barhumi (United Arab Emirates University, UAE); Naofal Al-Dhahir (University of Texas at Dallas, USA)

Identifying Non-Adjacent Multiuser Allocations by Joint l1-Minimization
Dennis Wieruch (Fraunhofer Institute for Telecommunications, Heinrich Hertz Institute, Germany); Peter Jung (TU-Berlin, Communications and Information Theory Group & Fraunhofer HHI - Heinrich Hertz Institute, Germany); Thomas Wirth (Fraunhofer Heinrich Hertz Institute, Germany); Armin Dekorsy (University of Bremen, Germany)

Modulation Classification of Mixed Signals using Fast Independent Component Analysis
Lu Wang, Qian Gao, Kezhong Zhang, Sai Huang, Yifan Zhang and Zhiyong Feng (Beijing University of Posts and Telecommunications, P.R. China)

NET5: Wireless Sensor Networks - 1

Room: PR 8

Optimization Framework with Reduced Complexity for Sensor Networks with In-Network Processing
Sepideh Nazemi Gelyan and Kin K. Leung (Imperial College, United Kingdom); Ananthram Swami (Army Research Lab., USA)

Ranging In Underwater Wireless Sensor Network: Received Signal Strength Approach
Saleheh Poursheikhali (Ferdowsi University of Mashhad, Iran); Hossein Zamiri-Jafarian (University of Toronto & Ferdowsi University of Mashhad, Canada)

On Using BOC Modulation in Ultra-Low Power Sensor Networks for Wildlife Tracking
Muhammad Nabeel (Paderborn University, Germany); Bastian Bloessl and Falko Dressler (University of Paderborn, Germany)

Impact of Time Synchronization Error on the Mode-shape Calculation in Wireless Sensor Networks for Structural Health Monitoring
Abderrazek Abdaoui (Qatar University & College of Engineering, Qatar); Mohamed Hossam Ahmed (Memorial University, Canada); Tarek M. Elfouly (Qatar University, Qatar)

The Impact of Anchor Misplacement on Sensing Coverage
Yaser Al Mtawa and Hossam S. Hassanein (Queen's University, Canada); Nidal Nasser (Alfaisal University, Saudi Arabia)

NET6: Energy-efficient Communications

Room: Cigar Lounge

An Energy-efficient Mechanism for Increasing Video Quality of Service in Wireless Mesh Networks
Adriana Hava and Gabriel-Miro Muntean (Dublin City University, Ireland); John Murphy (University College Dublin, Ireland)

Dynamic Adjustment of Idle Mode Sleep Time by Received Power Outage Probability
Can Altay and Gurkan Gur (Bogazici University, Turkey); Selami Ciftci (Turk Telekom Group R&D, Turkey); Fatih Alagoz (Bogazici University, Turkey)

Access Points Selection in Super WiFi Network Powered by Solar Energy Harvesting
Tingwu Wang, Chunxiao Jiang and Yong Ren (Tsinghua University, Beijing, P.R. China)

QPSO-based Energy-aware Clustering Scheme in the Capillary Networks for Internet of Things Systems
Liumeng Song, Kok Keong Chai and Yue Chen (Queen Mary University of London, United Kingdom); Jonathan Loo (Middlesex University, United Kingdom); Shihab Jimaa (Khalifa University, UAE); John Schormans (Queen Mary, University of London, United Kingdom)

Study of context-awareness efficiency applied to duty cycled Wireless Sensor Networks
Dhouha Ghrab and Imen Jemili (University of Manouba, Tunisia); Abdelfettah Belghith (University of Manouba & National School of Computer Sciences ENSI, Tunisia); Mosbah Mohamed (University of Bordeaux & LaBRI, France)

APP 5: Data Centers and Storage

Room: Ghazal

Secure Data Storage Structure and Privacy-Preserving Mobile Search Scheme for Public Safety Networks
Hamidreza Ghafghazi (University of Ottawa, Canada); Amr Elmougy (The German University in Cairo, Egypt); Hussein T Mouftah and Carlisle Adams (University of Ottawa, Canada)

VacoNet: Variable and Connected Architecture For Data Center Networks
Zina Chkirbene, Sebti Foufou and Ridha Hamila (Qatar University, Qatar)

PTNet: A parameterizable Data Center Network
Emna Baccour, Sebti Foufou and Ridha Hamila (Qatar University, Qatar)

Optimization of Power and Migration Cost in Virtualized Data Centers
Muhammad T Anan and Nidal Nasser (Alfaisal University, Saudi Arabia); Ala Al-Fuqaha (Western Michigan University, USA); Azeem Ahmed (Alfaisal University, Saudi Arabia)

SAM: A Secure Anti-Malware Framework for the Smartphone Operating Systems
Md Shahrear Iqbal (Queen's University & Bangladesh University of Engineering and Technology, Canada); Mohammad Zulkernine (Queen's University, Canada)

PAN 3: Roadmap to 5G and Beyond: Global Perspectives

Room: Dafna

•Malik Gul, National Instruments, USA •Dr. Halim Yanikomeroglu, Carleton University, Canada •Dr. Merouane Debbah, Huawei, Paris, France•Dr. Reinaldo Valenzuela, Bell Labs, Alcatel-Lucent, USA •Dr Geoffrey Li, Georgia Tech, Atlanta, USA

MAC-P: Poster Session - MAC/Scheduling/Resource Management

Room: Dafna Foyer

VMR-MAC: A Multi-Round Contention based MAC Protocol for Vehicular Networks
Yiwei Mao and Lianfeng Shen (National Mobile Communications Research Laboratory, Southeast University, P.R. China)

A MAC Solution for Distributed Coordination of 5G LAA Operator Networks and Fair Coexistence with WLAN in Unlicensed Spectrum
Mohamed Salem (Huawei Technologies Co. LTD., Canada); Amine Maaref (Huawei Technologies Canada, Canada)

Fully Distributed Scheduling in Cloud-RAN Systems
Hazem Soliman and Alberto Leon-Garcia (University of Toronto, Canada)

Cross-Layer QSI-Aware Radio Resource Management for HetNets with Flexible Backhaul
Naeimeh Omidvar and An Liu (Hong Kong University of Science and Technology, Hong Kong)

Rethinking Mobile Data Offloading in LTE and WiFi Coexisting Systems
Qimei Chen and Guanding Yu (Zhejiang University, P.R. China); Amine Maaref (Huawei Technologies Canada, Canada); Geoffrey Li (Georgia Tech, USA); Aiping Huang (Zhejiang University, P.R. China)

On the Orchestration of Robust Virtual LTE-U Networks from Hybrid Half/Full-duplex Wi-Fi APs
Mohammad J. Abdel-Rahman, Mohamed Abdelraheem and Allen B. MacKenzie (Virginia Tech, USA); Kleber V Cardoso (Universidade Federal de Goiás, Brazil); Marwan Krunz (University of Arizona, USA)

Tuesday, April 5

Tuesday, April 5, 09:00 - 10:00

KEY 2: Opportunism and Symbiosis in Mobile Cloud Computing: The Promise and the Challenges

Dr. Mostafa Ammar, Georgia Tech, USA

Room: Salwa 2

Mostafa Ammar is a Regents' Professor with the School of Computer Science at the Georgia Institute of Technology. He has been with Georgia Tech since 1985. Dr. Ammar received the S.B. and S.M. degrees from the Massachusetts Institute of Technology in 1978 and 1980, respectively and the Ph.D. degree from the University of Waterloo, Ontario, Canada in 1985. Dr. Ammar's research interests are in network architectures, protocols and services. He has contributions in the areas of multicast communication and services, multimedia streaming, content distribution networks, network simulation, disruption-tolerant networks, virtual network design, and most recently in mobile cloud computing. He has published extensively in these areas. To date, 33 PhD students have completed their degrees under his supervision; many have gone on to distinguished careers in academia and industry. Dr. Ammar has served the research community in multiple roles. Most notably, he served as the Editor-in-Chief of the IEEE/ACM Transactions on Networking (ToN) from 1999 to 2003, and he was the co-TPC Chair for the IEEE ICNP 1997, ACM CoNEXT 2006 and ACM SIGMETRICS 2007 conferences. His awards include the IBM Faculty Partnership Award (1996), Best Paper Award at the 7th WWW conference (1998), the Georgia Tech Outstanding Doctoral Thesis Advisor Award (2006), the Outstanding Service Award from the IEEE Technical Committee on Computer Communications (2010), and the ACM Mobihoc Best Paper Award (2012). Dr. Ammar was elected Fellow of the IEEE in 2002 and Fellow of the ACM in 2003.

Tuesday, April 5, 10:30 - 12:10

PHY-I2: Interference Management II

Room: Salwa 2

Invited talk: Interference Management in Wireless Networks
Babak Hassibi (California Institute of Technology, USA)

Superposition Coding Based Inter-User Interference Cancellation In Full Duplex Cellular System
Wenping Bi (University of Tsinghua, P.R. China); Xin Su, Limin Xiao and Shidong Zhou (Tsinghua University, P.R. China)

Analysing Self Interference Cancellation in Full Duplex Radios
Nurul H. Mahmood (Aalborg University, Denmark); Imran Shafique Ansari (Texas A&M University at Qatar (TAMUQ), Qatar); Gilberto Berardinelli (Aalborg University, Denmark);

Preben Mogensen (Nokia Siemens Networks, Aalborg, Denmark); Khalid A. Qaraqe (Texas A&M University at Qatar, USA)

Interference Coordination-based Downlink Scheduling for Heterogeneous LTE-A Networks
Rico Mendrzik (Hamburg University of Technology, Germany); Rodrigo Justavino (TU Hamburg-Harburg, Germany); Gerhard Bauch (Hamburg University of Technology, Germany); Eiko ES Seidel (Nomor Research GmbH, Germany)

PHY12: MIMO-OFDM Systems

Room: Salwa 1

Robust Precoded MIMO-OFDM for Mobile Frequency-Selective Wireless Channels
Fatma Kalbat (Khalifa University of Science, Technology and Research, UAE); Arafat Al-Dweik and Bayan S Sharif (Khalifa University, UAE); George K. Karagiannidis (Aristotle University of Thessaloniki, Greece)

MIMO-OFDM Transmissions Invoking Space-Time/Frequency Linear Dispersion Codes Subject to Doppler and Delay Spreads
Jiayi Zhang (National Institute of Standards and Technology, USA); Hamid Gharavi (NIST & ITL, USA); Bin Hu (National Institute of Standards and Technology, USA)

Joint Time-Frequency Estimation DMIMO-OFDM in presence of ICI
Sucharita Chakraborty (IIT Kharagpur, India); Debarati Sen (Indian Instutute of Technology Kharagpur, India)

Selective Optimal Detection for MIMO OFDM Systems
Mohammed Kashoob (The University of York, United Kingdom); Yury Zakharov (University of York, United Kingdom)

Comparison of Two Channel Shortening Approaches for MIMO-ISI Channels
Sha Hu and Fredrik Rusek (Lund University, Sweden); Naofal Al-Dhahir (University of Texas at Dallas, USA)

PHY13: Wireless Networks I

Room: Salwa 3

Coverage and Capacity of 28 GHz Band in Indoor Stadiums
Muhammad Nazmul Islam, Sundar Subramanian, Andrzej Partyka and Ashwin Sampath (Qualcomm, USA)

Multi-Beam Zooming: An Enabler for Energy Efficient 5G Network
Sai Krishna Karthik Molluru (SASTRA University, India); Ilker Demirkol (Universitat Politecnica de Catalunya & i2CAT Foundation, Spain); Wei-Ho Chung (Academia Sinica, Taiwan)

Throughput Scaling Laws of Hybrid Wireless Networks with Proximity Preference
Xin Yuan (Beijing University of Post and Telecommunications, P.R. China); Zhiqing Wei, Zhiyong Feng, Qixun Zhang and Wei Li (Beijing University of Posts and Telecommunications, P.R. China)

A Novel Link Scheduling Algorithm for Wireless Networks using Directional Antenna
Zhaoshu Tang, Ming Zhu, Lei Wang and Ma Honglian (Dalian University of Technology, P.R. China)

Optimal Energy Efficient Association for Small Cell Networks With QoS Requirements
YuKe Cui, Wei Xu, Hong Shen and Hua Zhang (Southeast University, P.R. China); Xiaohu You (National Mobile communication Research Lab., Southeast University, P.R. China)

PHY14: Channel Modeling

Room: Dukhan

Radio Channel Characterization at 5.85 GHz for Wireless M2M Communication of Industrial Robots

Bernd Holfeld, Dennis Wieruch, Leszek Raschkowski and Thomas Wirth (Fraunhofer Heinrich Hertz Institute, Germany)

When the Whispers Become Noise: A Contemporary Look at Radio Noise Levels

Alexandros Palaios (RWTH Aachen University, Germany); Vanya Miteva (RWTH Aachen, Germany); Janne Riihijärvi and Petri Mähönen (RWTH Aachen University, Germany)

Channel Gain Prediction for Wireless Links With Kalman Filters and Expectation-Maximization

Sami Mekki (France Research Center, Huawei Technologies, France); Mustapha Amara (France Research Center, Huawei Technologies Co., Ltd., France); Afef Feki (France Research Center, Huawei Technologies, France); Stefan Valentin (Huawei Technologies, France)

Analysis and Comparison of 24 GHz cmWave Radio Propagation in Urban and Suburban Scenarios

Ignacio Rodriguez (Aalborg Universitet, Denmark); Erika Almeida (INDT - Institute of Technology Development, Brazil); Renato Abreu (INDT, Brazil); Mads Lauridsen (Aalborg University, Denmark); Alexandre Loureiro (INDT, Brazil); Preben Mogensen (Aalborg University, Denmark)

A Millimeter Wave Spatial Channel Model with Variant Angles and Variant Path Loss

Yi Wang and Zhenyu Shi (Huawei Technologies Co., Ltd, P.R. China); Mingde Du (Huawei, P.R. China); Wen Tong (Huawei Technologies Canada Co., Ltd., Canada)

MAC 6: Energy Efficiency in LTE Networks 1

Room: PR5

Multi-RAT Wireless Network Capacity Optimization under Optimal Spectrum Splitting in LTE-U

Jin Li (Korea Advanced Institute of Science and Technology, Korea); Youngnam Han (KAIST, Korea)

Impact of the ITU-R Maritime Propagation on the Dimensioning of a Centralized LTE MANET

Achraf Kessab (Telecom Paristech & Thales Communications & Security, France); Lina Mroueh (Institut Supérieur d'Electronique de Paris, France); Philippe Martins (Telecom Paristech, France); Serge Hethuin (Thales Communication and Security, France)

Power Allocation in Uplink LTE Femtocells with Zero Forcing Frequency Domain Equalizer

Behzad Khamidehi and Maryam Sabbaghian (University of Tehran, Iran); Hamid Saeedi (Tarbiat Modares University, Iran)

Layer Management Through Idle-Mode Parameter Optimization in Multi-Carrier LTE Networks

Mehrzad Malmirchegini (QUALCOMM, USA); Mutaz Shukair (Qualcomm Technologies Inc & Wichita State University, USA); Peter Rached, Mouaffac Ambriss and Kausik Ray Chaudhuri (Qualcomm, USA); Sandip Sarkar (QualComm, USA)

Multi-Armed Bandit for LTE-U and WiFi Coexistence in Unlicensed Bands

Samantha Sriyananda (Florida International University, Finland); Imtiaz Parvez and Ismail Güvenç (Florida International University, USA); Mehdi Bennis (Centre of Wireless Communications, University of Oulu, Finland); Arif Sarwat (Florida International University, USA)

MAC 7: Massive-MIMO Systems

Room: PR6

Adaptive Clustering and CSI Acquisition for FDD Massive MIMO Systems with Two-level Precoding
Apostolos Destounis (Huawei Technologies France Research Center, France); Marco Maso (Mathematical and Algorithmic Sciences Lab, Huawei France Research Center, France)

Adaptive User Grouping Algorithm for the Downlink Massive MIMO Systems
Makram Alkhaled (The University of Manchester, United Kingdom); Emad Alsusa (Manchester University, United Kingdom); Wahyu Pramudito (University of Manchester, United Kingdom)

Adaptive Pilot-Duration and Resource Allocation in Virtualized Wireless Networks with Massive MIMO
Rajesh Dawadi and Saeedeh Parsaeefard (McGill University, Canada); Mahsa Derakhshani (Imperial College London, United Kingdom); Tho Le-Ngoc (McGill University, Canada)

Coverage Analysis for Dense Millimeter Wave Cellular Networks: The Impact of Array Size
Xianghao Yu, Jun Zhang and Khaled B. Letaief (The Hong Kong University of Science and Technology, Hong Kong)

Energy consumption optimization in 5G networks using multilevel beamforming and large scale antenna systems
Fatma Salem, Abdoulaye Tall, Zwi Altman and Azeddine Gati (Orange Labs, France)

NET7: Wireless Sensor Networks - 2

Room: PR 7

A Stateless Time-based Authenticated-Message Protocol for Wireless Sensor Networks (STAMP)
Eric Renault (Institut Mines-Telecom -- Telecom SudParis & Samovar UMR CNRS 5157, France); Selma Boumerdassi (Conservatoire National des Arts et Métiers, France); Paul Muhlethaler (INRIA, France)

Monte Carlo Localization for Path-Based Mobility in Mobile Wireless Sensor Networks
Salke Hartung, Ansgar Kellner, Konrad Rieck and Dieter Hogrefe (University of Goettingen, Germany)

Fault Tolerant Placement Strategy for WSN
Hanen Idoudi and Jihen Bennaceur (National School of Computer Science - University of Manouba, Tunisia)

PITM: Passive Indoor Object Tracking with Markov Probability Estimation in Wireless Sensor Networks
Jun Tao, Jianhua Liu, Tianqi Zhai, Chen Guo, Ziyi Zhang and Jian He (Southeast University, P.R. China)

Evaluating Time Synchronization Using Application-Layer Time-Stamping
Osameh Al Kofahi (Yarmouk University, Jordan)

NET8: Cognitive Radio Networks

Room: PR 8

Primary User Activity Prediction Based Joint Topology Control and Stable Routing in Mobile Cognitive Networks
Yan Xue (Shanghai Jiao Tong University, P.R. China); Can Tang (The Australian National

University, Australia); Feilong Tang (Shanghai Jiao Tong University, P.R. China); Yanqin Yang (East China Normal University, P.R. China); Jie Li (University of Tsukuba, Japan); Minyi Guo (Shanghai Jiao Tong University, P.R. China)

ChiMaS: A Spectrum Sensing-based Channels Classification System for Cognitive Radio Networks
Lucas Bondan (Federal University of Rio Grande do Sul (UFRGS), Brazil); Marcelo Antonio Marotta and Leonardo Roveda Faganello (Federal University of Rio Grande do Sul, Brazil); Juergen Rochol (UniversityFederal do Rio Grande do Sul, Brazil); Lisandro Z Granville (Federal University of Rio Grande do Sul, Brazil)

A Joint Multi-Channel Assignment and Power Control Scheme for Energy Efficiency in Cognitive Radio Networks
Nasser Shami and Mehdi Rasti (Amirkabir University of Technology, Iran)

Space-Time Opportunistic Interference Alignment in Cognitive Radio Networks
Idris Abdulkadir Yusuf, Oluyomi Simpson, Nnamdi Nwanekezie and Yichuang Sun (University of Hertfordshire, United Kingdom)

An Evolutionary Game Theoretic Approach for Cooperative Spectrum Sensing
Ahmed Mahmoud Salama, Abdulla K Al-Ali and Amr Mohamed (Qatar University, Qatar)

NET9: LTE Systems

Room: Cigar Lounge

Virtual Cell-Based Mobility Enhancement and Performance Evaluation in Ultra-Dense Networks
Na Meng (Beijing University of Posts and Telecommunications, P.R. China); Hongtao Zhang (Beijing University of Posts and Telecommunications & Key Lab of Universal Wireless Communications, Ministry of Education, P.R. China)

Secure and Efficient Uniform Handover Scheme for LTE-A Networks
Zaher Haddad (Alaqsa University & Cairo University, Palestine); Mohamed M E A Mahmoud (Tennessee Tech University, USA); Imane A. Saroit and Sanaa Taha (Cairo University, Egypt)

Mobility State Estimation in LTE
Majed Haddad (University of Avignon, France); Dalia Georgiana Herculea (Alcatel-Lucent Bell-Labs France, France); Eitan Altman (INRIA, France); Nidham Ben Rached (Alcatel-Lucent, France); Veronique Capdevielle (Alcatel Lucent Bell Labs France, France); Chung Shue Chen (Bell Labs, France); Frederic Ratovelomanana (Alcatel-Lucent, France)

A Study on Single-Cell Point-to-Multipoint Transmission for Public Safety Communications with eMBMS LTE Networks
Ahmad Awada (Nokia Bell Labs, Germany); David Navratil (Nokia Networks, Finland); Mikko Säily (Nokia Bell Labs, Finland)

A Heuristic Approach to Mobility Robustness in 4G LTE Public Safety Networks
Riccardo Fedrizzi (Create-Net, Italy); Leonardo Goratti (Create-net, Italy); Tinku Rasheed (Create-Net Research, Italy); Sithamparanathan Kandeepan (RMIT University, Australia)

APP 6: Intelligent Transportation Systems

Room: Ghazal

Design, Implementation and Experiments of a Wi-Fi D2D-based Automatic Vehicle Location (AVL) system
Ping-Fan Ho and Jyh-Cheng Chen (National Chiao Tung University, Taiwan)

Cyber Physical Systems: A Framework for Dynamic Traffic Light Control at Road Intersections

Ossama Younis (National Institute of Standards and Technology, USA); Nader Moayeri (NIST, USA)

Versatile Real-Time Traffic Monitoring System Using Wireless Smart Sensors Networks
Walid Balid and Hasan Tafish (University of Oklahoma, USA); Hazem Refai (Oklahoma University, USA)

Traffic Signs Localisation and Recognition Using A Client-Server Architecture
Abdelhamid Mammeri, Azzedine Boukerche and Jingwen Feng (University of Ottawa, Canada)

Context-Aware Traffic Light Self-Scheduling (CA-TLS) Algorithm
Maram Bani Younes (University of Ottawa & Philadelphia University, Jordan); Azzedine Boukerche and Abdelhamid Mammeri (University of Ottawa, Canada)

PAN 4: The Internet-of-Things (IoT): Challenges and Opportunities

Room: Dafna

•Dr. Emilio Strinati, Smart Devices & Telecommunications Strategy Program Director, CEA-LETI, France.•Dr. Guillaume Chelius, Founder and CEO, HiKoB, France.•Mr. Jurgen Hase, Group Director M2M, Group B2B Commercial, Ooredoo, Qatar.•Dr. Fadel Digham, Executive Director, Research & Development, National Telecom Regulatory Authority (NTRA), Egypt.

APP-P: Poster Session - Advances in Wireless Networks

Room: Dafna Foyer

A Distributed D-hop Cluster Formation for VANET
Meysam Azizian (Université de Sherbrooke, Quebec, Canada); Soumaya Cherkaoui (Université de Sherbrooke, Canada); Abdelhakim Hafid (University of Montreal, Canada)

Quantifying Caching Effects in Urban VANETs
Chaoyi Bian, Tong Zhao and Xiaoming Li (Peking University, P.R. China); Xiaojiang Du (Temple University, USA); Mohsen Guizani (QU, USA); Wei Yan (Peking University, P.R. China)

Measuring Safety Awareness in Cooperative ITS Applications
Muhammad Awais Javed (Qatar Mobility Innovations Center, Qatar); Elyes Ben Hamida (Qatar Mobility Innovations Center (QMIC), Qatar)

COUP in VANETs: Vehicular Content Distribution Using Collaborative Urban Parking Clusters
Ma Chunmei (Tianjin Normal University & University of Electronic Science and Technology, P.R. China); Haigang Gong and Xiaomin Wang (University of Electronic Science and Technology of China, P.R. China); Han Hu (Nanyang Technological University, Singapore); Ming Liu (University of Electronic Science and Technology of China, P.R. China)

A Distributed Prevention Scheme from Malicious Nodes in VANETs' Routing Protocols
Tarek Bouali (DRIVE Lab, ISAT Nevers, France); Hichem Sedjelmaci (University of Bourgogne, DRIVE Lab, France); Sidi-Mohammed Senouci (University of Bourgogne - ISAT Nevers, France)

A Stochastic Geometry-based Demand Response Management Framework for Cellular Networks Powered by Smart Grid
Muhammad Junaid Farooq (Qatar Mobility Innovations Center (QMIC), Qatar); Hakim Ghazzai (Qatar Mobility Innovations Center & QMIC, Qatar); Abdullah Kadri (Qatar Mobility Innovations Center, Qatar)

Verification of 3G and 4G Received Power Measurements in a Crowdsourcing Android App
Mads Lauridsen (Aalborg University, Denmark); Ignacio Rodriguez (Aalborg Universitet,

Denmark); Lars M Mikkelsen, Lucas Chavarria Gimenez and Preben Mogensen (Aalborg University, Denmark)

A User Centric Self-optimizing Grid-based approach for Antenna Steering Based on Call Detail Records
Naim Bitar (The University of Oklahoma, USA); Ali Imran (University of Oklahoma, USA); Hazem Refai (Oklahoma University, USA)

Intercept Probability Analysis of Relay Selection for Wireless Communications in the Presence of Multiple Eavesdroppers
Xiaojin Ding (Southeast University, P.R. China); Tiecheng Song (National Mobile Communications Research Laboratory, Southeast University, P.R. China); Yulong Zou (Nanjing University of Posts and Telecommunications, P.R. China); Xiaoshu Chen (University of Southeast, P.R. China)

Tuesday, April 5, 14:00 - 15:40

MAC-I2: Energy Efficiency in LTE Networks 2

Room: Salwa 2

Invited Talk: Unlicensed LTE
Geoffrey Ye Li (Georgia Institute of Technology, USA)

Iterative Greedy Algorithms for Energy Efficient LTE Small Cell Networks
Ying Wang, Xiangming Dai, Jason Min Wang and Brahim Bensaou (The Hong Kong University of Science and Technology, Hong Kong)

Battery Life Extension for WLAN-LTE Aggregation
Sunheui Ryoo, Jungsoo Jung and Jung-Min Moon (Samsung Electronics, Korea); Byoung Hoon Jung and Seung-Hoon Park (Samsung, Korea)

Downlink HARQ Enhancement for Listen-Before-Talk Based LTE in Unlicensed Spectrum
Jing Wang (DOCOMO Beijing Communication Laboratories Co., Ltd, P.R. China); Liu Liu (DOCOMO Beijing Communications Laboratories Co., Ltd, P.R. China); Hiroki Harada (NTT DoCoMo, Inc., Japan); Huiling Jiang (DOCOMO Beijing Communications Laboratories Co., Ltd., P.R. China)

PHY15: MIMO Relaying

Room: Salwa 1

Outage Probability of Spatially Correlated MIMO Full-Duplex Relaying with Imperfect CSI
Ahmed M Almradi (The University of Manchester, United Kingdom); Khairi A. Hamdi (University of Manchester, United Kingdom)

A Low Complexity Relay Selection & Power Allocation Schemes for Cognitive MIMO Buffer-Aided DF Relay Networks
Yasser F. Al-Eryani (King Fahd University of Petroleum and Minerals (KFUPM), Saudi Arabia); Anas M. Salhab (King Fahd University of Petroleum & Minerals, Saudi Arabia); Salam A. Zummo (KFUPM, Saudi Arabia)

Cooperative Communication in Spatially Modulated MIMO systems
Neeraj Varshney (Indian Institute of Technology Kanpur, India); Amish Goel (Indian Institute of Technology Kanpur India, India); Aditya K Jagannatham (Indian Institute of Technology Kanpur, India)

RF-Chain Constrained Multi-pair Massive MIMO Relaying Using Hybrid Precoding and Detection
Jian Liu, Wei Xu and Shi Jin (Southeast University, P.R. China); Xiaodai Dong (University of

Victoria, Canada)

PHY16: Wireless Networks II

Room: Salwa 3

Impact of 3D Propagation on Wi-Fi Performance in MIMO System
Reham Almesaeed (University Of Bristol, United Kingdom); Angela Doufexi and Andrew Nix (University of Bristol, United Kingdom)

Joint Rate Adaptation, Frame Aggregation and MIMO Mode Selection for IEEE 802.11ac
Saeed Abdallah (University of Sharjah, UAE); Steven D Blostein (Queen's University, Canada)

MU-MIMO Channel Emulator with Automatic Channel Sounding Feedback for IEEE 802.11ac
Tran Thi Thao Nguyen, Leonardo Jr. Lanante, Yuhei Nagao, Masayuki Kurosaki and Hiroshi Ochi (Kyushu Institute of Technology, Japan)

Calculation of Optimum Transmit Power in an IEEE 802.15.4-Based Wireless Sensor Network Employing Cooperative Relaying
Syed Muhammad Haider Aejaz and Andreas Springer (Johannes Kepler University Linz, Austria)

Cooperative Routing for Collision Probability Minimization in Wireless Sensor Networks
Fatemeh Mansourkiaie (Memorial University of Newfoundland, Canada); Mohamed Hossam Ahmed (Memorial University, Canada)

PHY17: Cellular Networks II

Room: Dukhan

Low Complexity Base Station Cooperation in Cellular Networks with Blockages
Christodoulos Skouroumounis, Constantinos Psomas and Ioannis Krikidis (University of Cyprus, Cyprus)

Computation Capacity Constrained Joint Transmission Design for C-RANs
Vu Nguyen Ha and Long Bao Le (INRS, University of Quebec, Canada)

An Efficient Reduced Complexity PAPR Reduction Approach For 3GPP LTE System
Mouna Sghaier and Fatma Abdelkefi (High School of Communications of Tunis (SUPCOM), Tunisia); Aymen Omri (Qatar University, Qatar); Mohamed Siala (Sup'Com, Tunisia)

3D MU-MIMO Transmission in LTE-A Downlink Systems
Wei Guo (School of Electronics and Information Engineering, Xi'an Jiaotong University, P.R. China); Jiancun Fan (Xi'an Jiaotong University, P.R. China); Geoffrey Li (Georgia Tech, USA); Qinye Yin (Xi'an Jiaotong University, P.R. China); Xiaolong Zhu and Yusun Fu (Huawei Shanghai Rearch Institute, P.R. China)

Gram-Schmidt Precoding for Two-Tier Cellular Networks with Massive MIMO
Namal Rajatheva and Elvino Silveira Sousa (University of Toronto, Canada)

PHY18: Multicarrier Modulation

Room: PR5

WFRFT Precoding for Generalized Frequency Division Multiplexing
Zhenduo Wang and Lin Mei (Harbin Institute of Technology, P.R. China); Xiaolu Wang (HIT, P.R. China); Naitong Zhang (Communication Research Center, Harbin Institute of Technology, P.R. China)

Optimal Lattice Spacing for GFDM with Gaussian Waveform
Stephan Schedler (Universität Rostock, Germany); Volker Kuehn (University of Rostock, Germany)

Multi-taper implementation of GFDM
Shravan Kumar Bandari and Venkata Mani Vakamulla (National Institute of Technology Warangal, India); Anastasios Drosopoulos (TEI of Western Greece, Greece)

Coded Constellation Rotated Vector OFDM with Generalized Linear Interleaver
Chenggao Han (University of Electro-Communications, Japan)

On ISI and ICI cancellation for FBMC/OQAM system using iterative decoding and ML detection
Yahya Jasim Harbi and Alister G. Burr (University of York, United Kingdom)

MAC 8: Energy Efficiency in Multihop Networks

Room: PR6

Topology-Transparent Scheduling in Mobile Multihop Ad Hoc Networks with Directional Antennas
Yiming Liu (China Acedamy of Electronics and Information Technology, P.R. China); Lina Weng (Beijing University of Posts and Telecommunications, P.R. China); Victor O. K. Li (University of Hong Kong, P.R. China); Shanfeng Xu (China Acedamy of Electronics and Information Technology, P.R. China)

A Delay-aware Packet Prioritisation Mechanism for Voice over IP in Wireless Mesh Networks
Cristian Olariu (University College Dublin, Ireland); John Fitzpatrick (Rapid7, Ireland); Yacine Ghamri-Doudane (University of la Rochelle, France); Liam Murphy (University College Dublin, Ireland)

Performance Analysis of SCMA Ad Hoc Networks: A Stochastic Geometry Approach
Lei Liu, Min Sheng, Junyu Liu, Yuzhou Li and Jiandong Li (Xidian University, P.R. China)

Fast Synchronisation Protocol with Collision Handling for Wireless Ad Hoc Networks
Imen Jemili (University of Manouba, Tunisia); Abdelfettah Belghith (University of Manouba & National School of Computer Sciences ENSI, Tunisia); Mosbah Mohamed (University of Bordeaux & LaBRI, France)

End-to-end Distortion Analysis of Multicasting over Orthogonal Receive Component Decode-Forward Cooperative Broadcast Channels
Payam Padidar, James Ho and Pin-Han Ho (University of Waterloo, Canada)

NET10: Heterogeneous Cellular Networks - 1

Room: PR 7

Trajectory based Mobility State Estimation for Heterogeneous Cellular Networks
Pravjyot Singh Deogun (Indian Institute of Technology (IIT) Bombay, India); Mahima Mehta (Intel Mobile Communications India Pvt. Ltd., India); Abhay Karandikar (IIT Bombay, India); Nadeem Akhtar (Mojo Networks, India)

On Revenue Efficiency for Coordinated Multipoint Transmission in Heterogeneous Cellular Networks
Min Xu, Xiaofeng Tao and Fan Yang (Beijing University of Posts and Telecommunications, P.R. China)

Analysis of Heterogeneous Cellular Network with Hexagonal Tessellated Macrocells and Randomly Positioned Small Cells
Xiaobin Yang and Abraham O Fapojuwo (University of Calgary, Canada)

Performance Analysis of Frequency Reuse Techniques under varying Cellular Network scenarios
Achonu Oluwole Adejo and Said Boussakta (Newcastle University, United Kingdom)

Performance Analysis for Cross-tier Cooperation in Heterogeneous Cellular Networks: A Stochastic Geometry Approach
Junxu Zhao and Qiang Wang (Beijing University of Posts and Telecommunications, P.R. China); Yue Dong (Beijing University of Post and Telecommunications, P.R. China); Wei Wei (Beijing University of Posts and Telecommunications, P.R. China)

NET11: Security and Privacy

Room: PR 8

A Probabilistic Energy-Efficient Approach for Monitoring and Detecting Malicious/Selfish Nodes in Mobile Ad-hoc Networks
Andrea Lupia and Floriano De Rango (University of Calabria, Italy)

Misbehaviour Detection in Vehicular Networks using Logistic Trust
Saneeha Ahmed (University of Windsor & University of Windsor, Canada); Kemal Tepe (University of Windsor, Canada)

Privacy-Aware Power Charging Coordination in Future Smart Grid
Mohamed M E A Mahmoud (Tennessee Tech University, USA); Muhammad Ismail (Texas A&M University at Qatar, Qatar); Prem Kumar Akula (Tennessee Technological University, USA); Kemal Akkaya (Florida International University, USA); Erchin Serpedin (Texas A&M University, USA); Khalid A. Qaraqe (Texas A&M University at Qatar, USA)

A Practical Group Matching Scheme for Privacy-Aware Users in Mobile Social Networks
Fenghua Li (State Key Laboratory of Information Security, Institute of Information Engineering, CAS, P.R. China); Hanyi Wang (University of Science and Technology of China, P.R. China); Ben Niu and Yuanyuan He (State Key Laboratory of Information Security, Institute of Information Engineering, CAS, P.R. China); Jiafeng Hua and Hui Li (Xidian University, P.R. China)

Trust-Based and Privacy-Preserving Fine-Grained Data Retrieval Scheme For MSNs
Enahoro Oriero and Khaled Rabieh (Tennessee Technological University, USA); Mohamed M E A Mahmoud (Tennessee Tech University, USA); Muhammad Ismail (Texas A&M University at Qatar, Qatar); Erchin Serpedin (Texas A&M University, USA); Khalid A. Qaraqe (Texas A&M University at Qatar, USA)

NET12: Resource Allocation and QoS Support

Room: Cigar Lounge

QoS-aware Joint RRH Activation and Clustering in Cloud-RANs
Hazem Soliman and Alberto Leon-Garcia (University of Toronto, Canada)

A Novel Streaming Method using QoS Control Function of LTE to Prevent Video Freezing
Yasuhiro Nagai (SoftBank Corp., Japan); Takao Okamawari (Softbank Mobile Corp., Japan); Teruya Fujii (Softbank Mobile, Japan)

Minimum Complexity APP Prioritization by Bandwidth Apportioning in Smart Phones
Karthikeyan Subramaniam (Samsung Research India, India); Kannan Govindan (Samsung Advanced Institute of Technology SAIT India, India); Sweta Jaiswal and Srihari Das Sunkada Gopinath (Samsung Research India, India)

A New Approach for Routing Plane Construction in Future Multi-Plane Routing based Wireless IP Access Networks
Mohammad Farhoudi, Alexandre Jaron, Andrej Mihailovic and Hamid Aghvami (King's College

London, United Kingdom)

Optimal Protection Resource Allocation: A Perspective of Network Science
Zeqi Zhang (Tsinghua University, P.R. China); Chunxiao Jiang and Yong Ren (Tsinghua University, Beijing, P.R. China)

APP 7: Wearable Sensing and Applications

Room: Ghazal

The Case of Face Recognition on Mobile Devices
Galal Hassan (Queen's University, Canada); Khalid Elgazzar (Carnegie Mellon University, USA)

Secure Data Access for Wireless Body Sensor Networks
Zhitao Guan and Tingting Yang (North China Electric Power University, P.R. China); Xiaojiang Du (Temple University, USA); Mohsen Guizani (QU, USA)

WBAN on NS-3: Novel Implementation with High Performance of IEEE 802.15.6
Wenwei Yue, Changle Li, Yueyang Song, Li Yang and Xiaoming Yuan (Xidian University, P.R. China)

Joint Throughput and Channel Aware (TCA) Dynamic Scheduling Algorithm for Emerging Wearable Applications
Muhammad Mahtab Alam (Qatar Mobility Innovation Center, Qatar); Elyes Ben Hamida (Qatar Mobility Innovations Center (QMIC), Qatar); Dhafer Ben Arbia (Qatar Mobility Innovations Center & SERCOM Lab, Polytechnic School of Tunisia, University of Carthage- Tunisia, Qatar)

QoE-Based Network Interface Selection for Heterogeneous Wireless Networks: A survey and e-Health case proposal
Mohamed Abdelkrim Senouci (UPEC, France); Sami Souihi (University Paris Est UPEC, France); Abdelhamid Mellouk and Said Hoceini (UPEC, University Paris-Est Creteil Val de Marne, France)

PAN 5: Connected and Autonomous Vehicles: From Vision to Reality

Room: Dafna

•Dr. Dawn Tilbury, Professor at University of Michigan, USA•Dr. Mehrdad Dianati, Associate Professor, University of Surrey, Guildford, United Kingdom.•Dr. Fethi Filali, Head, Technology Development, Qatar Mobility Innovations Center (QMIC), Doha, Qatar.•Mr. Malike Bouaoud, Head of Technology Trend and Smart Innovation Lab/Cyber Security expert, Ministry of Transport and Communications, Doha, Qatar.

PHY-P2: Poster Session II - PHY and Fundamentals

Room: Dafna Foyer

Reference Sequence design for Zero-Tail DFT-spread-OFDM
Gilberto Berardinelli (Aalborg University, Denmark); Frank Frederiksen (Nokia Siemens Networks, Denmark); Klaus Pedersen (Nokia Networks, Denmark); Preben Mogensen (Aalborg University, Denmark); Kari Pajukoski (Nokia, Finland)

Reed-Muller Lattice Coding for the Rayleigh Block Fading Channel
Carole Al Bechlawi (TELECOM Bretagne, France); Jean-Claude Belfiore (Telecom Paristech & Huawei Technologies, France); Frederic Guilloud (Institut Telecom - Telecom Bretagne, France)

MAP Optimum Receiver Mitigating Correlated Impulsive Noise
Fabien Sacuto, Gaëtan Ndo and Fabrice Labeau (McGill University, Canada); Basile Landaabalo Agba (Institut de Recherche d'Hydro-Québec & École de technologie superieure, Canada)

A Generalized Algorithm for the Generation of Arbitrary Correlated Nakagami Fading Channels
Yuming Bi (Beijing University of Posts and Telecommunications, P.R. China)

Optimal Joint Source-Relay Multi-Resolution Multicast Networks
Chen Zhi and Pin-Han Ho (University of Waterloo, Canada); James She (Hong Kong University of Science and Technology, Hong Kong); Sagar Naik (University of Waterloo, Canada)

Tuesday, April 5, 16:00 - 17:40

APP-I: Cloud Services

Room: Salwa 2

Invited Talk: Services in the Cloud and Big Data Era
Albert Zomaya (The University of Sydney, Australia)

Urban Traffic Characterization for Enabling Vehicular Clouds
Tao Zhang, Robson De Grande and Azzedine Boukerche (University of Ottawa, Canada)

Continuous Double Auction for Cloud Market: Pricing and Bidding Analysis
Yuchao Zhang, Ke Xu and Xuelin Shi (Tsinghua University, P.R. China); Haiyang Wang (University of Minnesota at Duluth, USA); Jiangchuan Liu (Simon Fraser University, Canada); Yong Wang (Tsinghua University, P.R. China)

PHY19: Physical Layer Security I

Room: Salwa 1

Cross MAC/PHY Layer Security Design Using ARQ with MRC and Adaptive Modulation
Jehad Hamamreh, Marwan Yusuf and Tuncer Baykas (Istanbul Medipol University, Turkey); Huseyin Arslan (University of South Florida, USA)

An Efficient Physical Layer Security Algorithm for Two-Way Relay Systems
Mohanad Obeed and Wessam Mesbah (King Fahd University of Petroleum and Minerals, Saudi Arabia)

Enhancing Physical Layer Security in Dual-Hop Multiuser Transmission
Waqas Aman (COMSATS Institute of Information Technology, Pakistan); Guftaar Ahmad Sardar Sidhu (COMSATS Institute of Information Technology, Germany); Tayyaba Jabeen (COMSATS Institute of Information Technology, Pakistan); Feifei Gao (Tsinghua University, P.R. China); Shi Jin (Southeast University, P.R. China)

A Practical Physical-Layer Security Method for Precoded OSTBC-Based Systems
Jehad Hamamreh (Istanbul Medipol University, Turkey); Ertugrul Güvenkaya (University of South Florida, USA); Tuncer Baykas (Istanbul Medipol University, Turkey); Huseyin Arslan (University of South Florida, USA)

Secrecy Rate Maximization for SIMO Wiretap Channel with Uncoordinated Cooperative Jamming under Secrecy Outage Probability Constraint
Xiaoyan Hu, Pengcheng Mu, Bo Wang, Zongmian Li and Hui-Ming Wang (Xi'an Jiaotong University, P.R. China); Ying Ju (Xi'an Jiaotong University & State Radio Monitoring Center, P.R. China)

PHY20: Wireless Networks III

Room: Salwa 3

Spatially-Coupled LDPC Coding in Cooperative Wireless Networks

Dushantha Nalin K. Jayakody and Vitaly Skachek (University of Tartu, Estonia); Bin Chen (University College Dublin, Ireland)

A Novel Multi-User Grouping Scheme for Downlink Non-Orthogonal Multiple Access Systems
Lei Yao (Beijing University of Posts and Telecommunications, P.R. China); Jie Mei (BUPT, P.R. China); Hang Long (Beijing University of Posts & Telecommunications, P.R. China); Long Zhao (BUPT, P.R. China); Kan Zheng (Beijing University of Posts&Telecommunications, P.R. China)

Optimal Channel Switching for Average Capacity Maximization in the Presence of Switching Delays
Ahmet Sezer and Sinan Gezici (Bilkent University, Turkey)

Maximization of Correct Decision Probability via Channel Switching over Rayleigh Fading Channels
Furkan Keskin, Mehmet Kurt, Mehmet Tutay, Sinan Gezici and Orhan Arikan (Bilkent University, Turkey)

Network Sum-Rate Maximizing Power Allocation Over Time-Varying Multiple-Access Interference Channels
Mohammed W. Baidas (Kuwait University, Kuwait); Emad Alsusa (Manchester University, United Kingdom); Khairi A. Hamdi (University of Manchester, United Kingdom)

PHY21: Relaying and Cooperative Communications I

Room: Dukhan

Enhancing Spectral Efficiency in Cooperative Cognitive Two-Way Amplify-and-Forward Relaying Networks
Ahmed Hassan Abd El-Malek (King Fahd University of Petroleum and Minerals, Saudi Arabia); Anas M. Salhab (King Fahd University of Petroleum & Minerals, Saudi Arabia); Salam A. Zummo (KFUPM, Saudi Arabia)

Beamforming in Asymmetric Two-Way Relay Systems with Imperfect Channel Estimation
Prabhat Kumar Upadhyay and Devendra Singh Gurjar (Indian Institute of Technology Indore, India)

Statistical Rate Analysis for Multi-Pair Two-Way Full-Duplex Relaying with Massive Antennas
Zhanzhan Zhang and Zhiyong Chen (Shanghai Jiao Tong University, P.R. China); Hao Feng (Shanghai Jiao Tong Univerisity, P.R. China); Manyuan Shen and Bin Xia (Shanghai Jiao Tong University, P.R. China); Ling Luo (Electric Power Research Institute, SMEPC, State Grid, P.R. China)

Full Duplex Relay in Millimeter wave Backhaul Links
Hatem Abbas and Khairi A. Hamdi (University of Manchester, United Kingdom)

Distributed Multi-Relay Selection via Political Coalition Formation in Cooperative Wireless Networks
Mohammed S. Bahbahani (University of Manchester, United Kingdom); Mohammed W. Baidas (Kuwait University, Kuwait); Emad Alsusa (Manchester University, United Kingdom)

MAC 9: Energy Efficiency in WLAN, WPAN, and Sensor Networks

Room: PR5

A Centralized Scheduling Algorithm for IEEE 802.15.4e TSCH based Industrial Low Power Wireless Networks
Yichao Jin (Toshiba Research Europe Ltd, United Kingdom); Parag Kulkarni (Toshiba Research

Europe Ltd., United Kingdom); James Wilcox (Toshiba Research Europe Ltd, United Kingdom); Mahesh Sooriyabandara (Toshiba Research Europe Limited, United Kingdom)

Cooperative WiFi Management: Nash Bargaining Solution and Implementation
Chunxiao Jiang (Tsinghua University, Beijing, P.R. China); Yaodong Zhang (TsingHua University, P.R. China); Jian Yuan (Tsinghua University, P.R. China); Yong Ren (Tsinghua University, Beijing, P.R. China); Zhu Han (University of Houston, USA)

On the Impact of RN16 Decoding Errors on Time Throughput of RFID Systems
Ezzeldin Zaki (German University in Cairo, Egypt); Tallal Elshabrawy (The German University in Cairo, Egypt); Mohamed Ashour (GUC, Egypt)

Dynamic Sensitivity Control Algorithm leveraging adaptive RTS/CTS for IEEE 802.11ax
M. Shahwaiz Afaqui, Eduard Garcia-Villegas and Elena Lopez-Aguilera (Technical University of Catalonia (UPC), Spain)

Energy Consumption and Performance of IEEE 802.15.4e TSCH and DSME
Iacob Juc (University of Grenoble, France); Andrzej Duda (Grenoble Institute of Technology, France); Michel Favre (STMicroelectronics, France); Olivier Alphand (Grenoble Institute of Technology, France); Roberto Guizzetti (STMicroelectronics, France)

PHY22: Wireless Energy Transfer

Room: PR6

Downlink Power Allocation for Wireless Information and Energy Transfer in Macrocell-Small Cell Networks
Sudha Lohani (The University of British Columbia, Canada); Ekram Hossain (University of Manitoba, Canada); Vijay Bhargava (University of British Columbia, Canada)

Power Transfer in Multi-Pair Two-way AF Relaying Networks with Zero-Forcing
Abdelhamid Salem and Khairi A. Hamdi (University of Manchester, United Kingdom)

Optimal Scheduling and Power Allocation for Wireless Powered Two-Way Relaying Systems
Runfa Zhou (The Hong Kong University of Science and Technology, Hong Kong); Roger Cheng (HKUST, Hong Kong)

A joint power and information transfer system using retransmissions
Behrooz Makki and Tommy Svensson (Chalmers University of Technology, Sweden); Michele Zorzi (Università degli Studi di Padova, Italy)

A saddle-point based approach for semi-analytical performance evaluation of a digital communication system
Fatima ezzahra Naamane (ENSIAS, Morocco); Mohamed Et-tolba (INPT, Morocco); Mostafa Belkasmi (ENSIAS - Mohammed V University - Rabat, Morocco)

NET13: LTE/WiFi Coexistence

Room: PR 7

Enabling Media Streaming over LTE-U Small Cells
Wessam Afifi (University of Arizona, USA); Mohamed Hassan (American University of Sharjah, UAE); Marwan Krunz (University of Arizona, USA)

Performance Evaluation of User Centric Multihoming Strategies in LTE/WiFi Networks
Ghina Dandachi (Institut Mines-Telecom, Telecom SudParis, France); Salah Eddine Elayoubi (Orange Labs, France); Tijani Chahed (Telecom SudParis, France); Nada Chendeb Taher (Lebanese University, Lebanon)

Channel Occupancy Cognition Based Adaptive Channel Access and Back-off Scheme for

LTE System on Unlicensed Band
Tuo Yang, Chunxia Guo, Siwen Zhao, Qixun Zhang and Zhiyong Feng (Beijing University of Posts and Telecommunications, P.R. China)

Spectrum Sharing for LTE and WiFi Coexistence Using Decision Tree and Game Theory
Fengen Cai, Yuehong Gao, Lei Cheng, Lin Sang and Dacheng Yang (Beijing University of Posts and Telecommunications, P.R. China)

A Field Trial of LTE in Unlicensed Bands with SDL (Supplemental Downlink) Transmission
Yang Lan and Lihui Wang (DOCOMO Beijing Communications Laboratories Co., Ltd, P.R. China); Huiling Jiang (DOCOMO Beijing Communications Laboratories Co., Ltd., P.R. China); Kazuki Takeda (NTT DOCOMO, INC., Japan); Hiroki Harada and Satoshi Nagata (NTT DoCoMo, Inc., Japan); Wenfang Tang (Huawei Technologies Co., Ltd., Beijing, P.R. China); Qiang Li (Huawei Technologies Co. Ltd., P.R. China)

NET14: Localization - 2

Room: PR 8

Accurate Range-Free Node Localization in Mobile Ad Hoc Networks
Slim Zaidi (University of Quebec, INRS-EMT, Canada); Ahmad El Assaf (INRS, Canada); Sofiene Affes (INRS-EMT, Canada); Nahi Kandil (Université du Québec en Abitibi-Temiscamingue, Canada)

Applying Kriging Interpolation for WiFi Fingerprinting based Indoor Positioning Systems
Hailong Zhao, Baoqi Huang and Bing Jia (Inner Mongolia University, P.R. China)

HED: Handling Environmental Dynamics in Indoor WiFi Fingerprint Localization
Yu Gu and Mengni Chen (Hefei University of Technology, P.R. China); Fuji Ren (The University of Tokushima, Japan); Jie Li (University of Tsukuba, Japan)

A Sparsity-Based Algorithm for Power-Efficient Node Localization
Zacharias Psarakis (Rutgers University, USA); Dimitris Toumpakaris (University of Patras, Greece)

Range-Free Node Localization in Multi-Hop Wireless Sensor Networks
Slim Zaidi (University of Quebec, INRS-EMT, Canada); Ahmad El Assaf (INRS, Canada); Sofiene Affes (INRS-EMT, Canada); Nahi Kandil (Université du Québec en Abitibi-Temiscamingue, Canada)

NET15: Localization and Sensing

Room: Cigar Lounge

Three Dimensional (3D) Underwater Sensor Network Architectures for Intruder Localization Using EM Wave
Md. Farhad Hossain (Bangladesh University of Engineering and Technology (BUET), Bangladesh); Musbiha Binte Wali (Bangladesh University of Engineering & Technology (BUET), Bangladesh); Kumudu S Munasinghe (University of Canberra, Australia); Abbas Jamalipour (University of Sydney, Australia)

An Indoor Localization System Based On Backscatter RFID Tag
Jun Wang, Yiyin Wang and Xinping Guan (Shanghai Jiao Tong University, P.R. China)

S-TDoA - Sequential Time Difference of Arrival - A Scalable and Synchronization Free Approach for Positioning
Mathias Pelka (Fachhochschule Lübeck, Germany); Horst Hellbrück (University of Applied Sciences Lübeck & CoSA Center of Excellence, Germany)

Fair QoI and Energy-aware Task Allocation in Participatory Sensing

Rim Ben Messaoud (LIGM - University Paris-Est, France); Yacine Ghamri-Doudane (University of la Rochelle, France)

MagiCrowd: A Crowd based Incentive for Location-aware Crowd Sensing
Yao Wu, Yuncheng Wu, Hui Peng, Hong Chen and Cuiping Li (Renmin University of China, P.R. China)

PHY23: Network Coding and Index Coding

Room: Ghazal

Optimization Scheme of Noisy Network Coding in the Two Way Relay Channels
Di Chen and Volker Kuehn (University of Rostock, Germany)

Optimal Coefficients for Channel-Coded Linear Physical Layer Network Coding
Mehrdad Tahernia and Soung Chang Liew (The Chinese University of Hong Kong, Hong Kong)

Index Coded PSK Modulation
Anjana Ambika Mahesh (Indian Institute of Science, Bangalore, India); B. Sundar Rajan (Indian Institute of Science, India)

On The Number Of Optimal Linear Index Codes For Unicast Index Coding Problems
Kavitha Radhakumar, Niranjana Ambadi and B. Sundar Rajan (Indian Institute of Science, India)

Estimation of an approximated likelihood ratio for iterative decoding in impulsive environment
Vincent Dimanche (University of Reims Champagne Ardennes, France); Alban Goupil (Université de Reims Champagne-Ardenne, France); Laurent Clavier (Institut Mines-Telecom, Telecom Lille & IEMN / IRCICA, France); Guillaume Gelle (University of Reims Champagne-Ardenne & CReSTIC, France)

PAN 6: Personalized Medicine and Mobile Health: Role of ICT

Room: Dafna

•Dr. Julio C. Silva, MD, MPH Chief Medical Informatics Officer, Sidra Medical and Research Center.• Dr. Lakshman Tamil, Professor, The University of Texas at Dallas, USA.•Dr. Waleed Qoronfleh, Director of Biotechnology Development, Qatar Biomedical Research Institute (QBRI), Qatar.•Dr. Roozbeh Jafari, Associate Professor, Center for Remote Health Technologies and Systems, College of Engineering, Texas A&M Univ. College Station, USA

Wednesday, April 6

Wednesday, April 6, 09:00 - 10:00

KEY 3: Resilient Wireless Communications - A Frontier to Be Challenged

Dr. Gerhard Fettweis, TU Dresden, Germany
Room: Salwa 2

Gerhard Fettweis earned his Ph.D. under H. Meyr's supervision from RWTH Aachen in 1990. After one year at IBM Research in San Jose, CA he moved to TCSI Inc., Berkeley, CA. Since 1994 he is Vodafone Chair Professor at TU Dresden, Germany, with currently 20 companies from Asia/Europe/US sponsoring his research on wireless transmission and chip design. He coordinates 2 DFG centers at TU Dresden, cfAED and HAEC. Gerhard is IEEE Fellow, member of acatech, has an honorary doctorate from TU Tampere, and has received multiple awards. In Dresden he has spun-out ten start-ups, and setup funded projects of more than EUR 1/3 billion volume. He has helped organizing IEEE conferences, most notably as TPC Chair of IEEE ICC 2009, IEEE TTM 2012, and General Chair of VTC Spring 2013. He remains active within IEEE.

Wednesday, April 6, 10:30 - 12:10

PHY-I3: Energy Harversting II

Room: Salwa 2

Invited Talk: Energy Harvesting for the Internet-of-Things
Ross Murch (HKUST, Hong Kong)

Wireless RF-based Energy Harvesting for Two-Way Relaying Systems
Ahmad Alsharoa (Iowa State University, USA); Hakim Ghazzai (Qatar Mobility Innovations Center & QMIC, Qatar); Ahmed E. Kamal (Iowa State University, USA); Abdullah Kadri (Qatar Mobility Innovations Center, Qatar)

Optimal Collaborative Energy Harvesting Spectrum Sensing With Limited Time Resource
Fariba Mohammadian (Qazvin International University, Iran); Zahra Pourgharehkhan and Abbas Taherpour (Imam Khomeini International University, Iran); Tamer Khattab (Qatar University, Qatar)

Energy Harvesting for Wearable Wireless Health Care Systems
Riad Kanan (Abu Dhabi University ADU, UAE)

PHY24: Physical Layer Security II

Room: Salwa 1

Secure Transmission with Artificial Noise in Millimeter Wave Systems
Ying Ju (Xi'an Jiaotong University & State Radio Monitoring Center, P.R. China); Hui-Ming Wang (Xi'an Jiaotong University, P.R. China); Tong-Xing Zheng (Xi'an Jiaotong Unviersity, P.R. China); Qinye Yin (Xi'an Jiaotong University, P.R. China)

A Low-Complexity Antenna Subset Modulation for Secure Millimeter-Wave Communication
Nafel Alotaibi and Khairi A. Hamdi (University of Manchester, United Kingdom)

Secrecy Beamforming Design for Large Millimeter-Wave Two-Way Relaying Networks
Shiqi Gong, Chengwen Xing, Fei Zesong and Jingming Kuang (Beijing Institute of Technology, P.R. China)

Secrecy Outage Probability for The Multiuser Downlink with Several Curious Users
Na Li and Xiaofeng Tao (Beijing University of Posts and Telecommunications, P.R. China); Hui Chen (Beijing University of Posts and Telecommunications (BUPT), P.R. China); Huici Wu (Beijing University of Posts and Telecommunications, P.R. China)

Secrecy Outage Probability Analysis for Cooperative Communication with Relay Selection Under Non-Identical Distribution
Esa R. Alotaibi and Khairi A. Hamdi (University of Manchester, United Kingdom)

PHY25: Selected Topics in Communications I

Room: Salwa 3

Efficient Near-Optimal 8x8 MIMO Detector
Hadi Sarieddeen, Mohammad Mansour and Ali Chehab (American University of Beirut, Lebanon)

Latency aware Decoder for High-Order Modulations MIMO transmissions with parallel processing architectures
Zhipeng Zhao (Huawei Technologies, FRC, France); Loig Godard (Huawei, France); Mohamed Kamoun (Huawei France, France)

Evaluation of the Hardware Complexity of the ADMM approach for LDPC decoding
Imen Debbabi (SUPCOM, Tunisia); Bertrand Le Gal (University of Bordeaux, France); Nadia Khouja (CIRTA'COM Laboratory Sup'Com Tunis, Tunisia); Fethi Tlili (Ecole Supérieure de Communications de Tunis, Tunisia); Christophe Jego (IMS CNRS Laboratory & IPB ENSEIRB-MATMECA, France)

A New Family of Filters for PAPR Reduction of Carrier Aggregated Signals
Sylvain Traverso (Thales Communications, France)

Properties of Faster-than-Nyquist Channel Matrices and Folded-Spectrum, and Their Applications
Yong Jin Daniel Kim (Rose-Hulman Institute of Technology, USA)

PHY26: Relaying and Cooperative Communications II

Room: Dukhan

Joint Optimization of Power Allocation and Relay Position for Lossy-Forwarding Relaying
Shen Qian (Japan Advanced Institute of Science and Technology & University of Oulu, Finland); Markku Juntti (University of Oulu, Finland); Tad Matsumoto (Japan Advanced Institute of Science and Technology, Japan)

On Relay Selection in Bursty Impulsive Noise Channel
MD. Sahabul Alam and Fabrice Labeau (McGill University, Canada)

Energy-Aware Relay Selection and Power Allocation for Multiple-User Cooperative Networks
Sabyasachi Gupta (Indian Institute of Technology Delhi, India); Ranjan Bose (Indian Institute of Technology, India)

Delay- and diversity-aware buffer-aided relay selection policies in cooperative networks
Dimitrios Poulimeneas (Royal Institute of Technology (KTH), Sweden); Themistoklis Charalambous (Chalmers University of Technology, Sweden); Nikolaos Nomikos (University of the Aegean, Greece); Ioannis Krikidis (University of Cyprus, Cyprus); Demosthenes Vouyioukas (University of the Aegean, Greece); Mikael Johansson (Royal Institute of Technology, Sweden)

Large Scale Opportunistic Antenna and User Selection in AF Relay Networks with Interference
Imene Trigui (INRS - Centre Energie, Materiaux et Telecommnunications, Canada); Sofiene Affes (INRS-EMT, Canada); Alex Stéphenne (Ericsson & INRS-EMT, Canada)

MAC 10: Spectrum Management and Cognitive Radio

Room: PR5

An Opportunistic Guard-band-aware Channel Assignment: A batch-based Approach
Haythem Bany Salameh (Yarmouk University, Jordan); Hadi Kasasbeh (The University of Mississippi, USA); Bassam Harb (Yarmouk University, Jordan)

Energy Efficient Cross Layer Design for Spectrum Sharing Systems
Abdulrahman Alabbasi (King Abdullah University of Science and Technology (KAUST), Saudi Arabia); Basem Shihada (KAUST, Saudi Arabia)

Optimizing Dynamic Spectrum Allocation for Cognitive Radio Networks Using Hybrid Access Scheme
Ayman Sabbah (Queen's University, Canada); Mohamed Ibnkahla (Carleton University, Canada)

Optimizing Multi-node Multi-carrier Cognitive Radio Transmission
Tayyaba Jabeen (COMSATS Institute of Information Technology, Pakistan); Guftaar Ahmad

Sardar Sidhu (Jacobs University Bremen, Germany); Feifei Gao (Tsinghua University, P.R. China); Shi Jin (Southeast University, P.R. China)

Channel Aggregation with Guard-Band in D-OFDM based CRNs: Modeling and Performance Evaluation
Songpu Ai (University of Agder, Norway); Lei Jiao (University of Agder & Department of Information and Communication Technology, Norway); Frank Y. Li and Milka Radin (University of Agder, Norway)

NET16: LTE Network Planning and Configuration

Room: PR6

Exploiting Multi-homing in Hyper Dense LTE Small-Cells Deployments
Abdellaziz Walid (ENSIAS, Mohammed V University of Rabat, Morocco); Essaid Sabir (ENSEM/UH2C, Morocco); Abdellatif Kobbane (ENSIAS, Mohammed V University of Rabat, Morocco); Tarik Taleb (Aalto University, Finland); Mohammed El Koutbi (ENSIAS, Morocco)

Cell Planning Based on Minimized Power Consumption for LTE Networks
Zhaohui Yang, Ming Chen, Linqiong Jia and Yun-Peng Wen (Southeast University, P.R. China); Zhang Yuan (Tsinghua University, P.R. China)

Cell cluster-based dynamic TDD DL/UL reconfiguration in TD-LTE systems
Fanglei Sun (Alcatel-Lucent, P.R. China); Yan Zhao (Alcatel-lucent shanghai bell, P.R. China)

Cell Outage Compensation Algorithm for Frequency Reuse One and ICIC LTE Networks
Omar Nasr (Cairo University, Egypt); Mai Said (Axxcerlera Broadband Wireless Egypt, Egypt); Tamer ElBatt (Faculty of Engineering, Cairo University & WINC, Nile University, Egypt)

Study on the Impact of Pico Site Antenna Pattern and Tilt on TD-LTE Networks in 3D Scenario
Sa Zhang (Beijing University of Posts and Telecommunications, P.R. China); ZhuYan Zhao and Hao Guan (Nokia Siemens Networks, P.R. China); Hongwen Yang (Beijing University of Posts and Telecommunications, P.R. China)

NET17: Multicast

Room: PR 7

An Energy-Efficient Multicast Protocol for ZigBee-based Networks
Shu-Chiung Hu, Chia-Hung Tsai and Yi-Cheng Lu (National Chiao-Tung University, Taiwan); Meng-Shiuan Pan (Tamkang University, Taiwan); Yu-Chee Tseng (National Chiao-Tung University, Taiwan)

Energy Optimal Multi-resolution Multicast With Asynchronous Relaying
Chen Zhi and Pin-Han Ho (University of Waterloo, Canada); James She (Hong Kong University of Science and Technology, Hong Kong)

PEMSE: A High-throughput Multicast Routing Protocol for Multi-rate IEEE802.11
Asma Ben Hassouna (Cristal Lab, ENSI, University of Manouba, Tunisia); Hend Koubaa (ISI Ariana, Tunisia); Leila Azouz Saidane (ENSI tunisia, Tunisia); Farouk Kamoun (SESAME University, Tunisia)

Mathematical Model of QoS-aware Multicast Transmission via Periodic Reservations
Aleksandr Sergeevich Ivanov, Evgeny Khorov, Egor Kuznetsov and Andrey Lyakhov (IITP RAS, Russia)

Cooperative Live Video Multicast for Small Cell Base Stations with Overlapping Coverage
Ozgu Alay (Simula Research Laboratory, Norway); Antonios Argyriou (University of Thessaly, Greece)

NET18: Network Coding

Room: PR 8

Security Enhanced via Dynamic Fountain Code Design for Wireless Delivery
Wanyu Li (Xi'an JiaoTong University, P.R. China); Qinghe Du, Li Sun, Pinyi Ren and Yichen Wang (Xi'an Jiaotong University, P.R. China)

Leaner and Meaner: Network Coding in SIMD enabled Commercial Devices
Chres W. Sørensen and Achuthan Paramanathan (Aalborg University, Denmark); Juan A Cabrera (Technische Universität Dresden, Germany); Morten V. Pedersen and Daniel E. Lucani (Aalborg University, Denmark); Frank H.P. Fitzek (Technische Universität Dresden & ComNets - Communication Networks Group, Germany)

Delivery Time Reduction for Order-Constrained Applications using Binary Network Codes
Ahmed Douik (California Institute of Technology, USA); Mohammad S. Karim and Parastoo Sadeghi (The Australian National University, Australia); Sameh Sorour (King Fahd University of Petroleum and Minerals (KFUPM), Saudi Arabia)

A Novel Systematic Raptor Network Coding Scheme for Mars-to-earth Relay Communication
Shushi Gu and Jian Jiao (Harbin Institute of Technology Shenzhen Graduate School, P.R. China)

NET19: D2D, UAV, and IOT Systems

Room: Cigar Lounge

Flow level analysis of the offloading capacity of D2D communications
Antonia Masucci, Salah Eddine Elayoubi and Berna Sayrac (Orange Labs, France)

A Two-Stages Relay Selection And Resource Allocation Joint Method for D2D Communication System
Ming Zhao, Xinyu Gu, Di Wu and Luming Ren (Beijing University of Posts and Telecommunications, P.R. China)

Distributed Sleep Management for Heterogeneous Wireless Machine-to-Machine Networks
Evripidis Paraskevas (University Of Maryland College Park, USA); Jianlin Guo (Mitsubishi Electronic Research Laboratories, USA); Philip Orlik (Mitsubishi Electric Research Laboratories, USA); Kentaro Sawa (Mitsubishi Electric Corporation, Japan)

A Three Dimensional Scalable and Distributed Conflict Detection Algorithm for Unmanned Aerial Vehicles
Imen Mahjri and Amine Dhraief (University of Manouba, Tunisia); Abdelfettah Belghith (College of Computer and Information Sciences, Tunisia)

Role of altitude when exploring optimal placement of UAV access points
Markus Gruber (Nokia Bell Labs, Germany)

APP 8: Applications Using Emerging wireless technologies

Room: Ghazal

A VLC-based System for Optical SPR Sensing Facility
Noha Anous, Mohamed M. Abdallah and Mohamed Kashef (Texas A&M University at Qatar, Qatar); Khalid A. Qaraqe (Texas A&M University at Qatar, USA)

An Implementation of Multichannel Multi-Interface MANET for Fire Engines and Experiments with WINDS Satellite Mobile Earth Station

Yasunori Owada (National Institute of Information and Communications Technology, Japan); Byongpyo Jeong (NICT, Japan); Norihiko Katayama and Kiyohiko Hattori (National Institute of Information and Communications Technology, Japan); Kiyoshi Hamaguchi (NICT, Japan); Masugi Inoue (National Institute of Information and Communications Technology, Japan); Ken-ichi Takanashi and Masafumi Hosokawa (National Research Institute of Fire and Disaster, Japan); Abbas Jamalipour (University of Sydney, Australia)

Non-audible Acoustic Communication and its Application in Indoor Location-based Services

Kashif Ali (University of California, Berkeley, USA); Hossam S. Hassanein and Sharief M.A. Oteafy (Queen's University, Canada)

Seamless Convergence of Radio-over-Fiber and Millimeter-Wave Links for Highly Resilient Access Networks

Abdelmoula Bekkali (KDDI R&D Laboratories Inc., Japan); Kosuke Nishimura (KDDI R&D Laboratories Inc. & Optical Access Network Laboratory, Japan)

A Highly-accurate Device-free Passive Motion Detection System Using Cellular Network

Zengshan Tian and Luyan Shao (Chongqing University of Posts and Telecommunications, P.R. China); Mu Zhou (Chongqing University of Posts and Telecommunications & Chongqing Key Lab of Mobile Communications Technology, P.R. China); Xiangyong Wang (Chongqing University of Posts and Telecommunications, P.R. China)

PAN 7: Security Issues & Challenges

Room: Dafna

•Dr. Zouheir Rezki, King Abdullah University for Science and Technology (KAUST), Saudi Arabia•Dr. Marc Dacier, Qatar Computing Research Institute, Qatar•Dr. Munir Tag, Director, ICT Program, Qatar National Research Fund, Qatar •Mr. Malike Bouaoud, Head of Technology Trend and Smart Innovation Lab/Cyber Security expert, Ministry of Transport and Communications, Doha, Qatar.•Dr. Gabriele Oligeri, Al Kindi Center, Qatar University

Wednesday, April 6, 14:00 - 15:40

PHY27: Relaying and Cooperative Communications III

Room: Salwa 2

Energy-Efficient Multi-Objective Power Allocation for Multi-User AF Cooperative Networks

Zhenzhou Tang and Qian Hu (Wenzhou University, P.R. China); Guanding Yu (Zhejiang University, P.R. China)

Outage Analysis of OFDM AF Relaying Systems Over Nakagami-m Fading Channels with Non-linear Power Amplifier

Nagendra Kumar (Indian Institute of Technology, Indore, India); Vimal Bhatia (Indian Institute of Technology Indore, India)

Outage Performance Analysis of Relay Selection in SWIPT Systems

Aissa Ikhlef (Newcastle University, United Kingdom); Mohammud Z Bocus (Toshiba Research Europe Ltd, United Kingdom)

Multiple-Access Capabilities of AF Relaying with Zero Forcing

Abdurrahman Alfitouri (Manchester University, United Kingdom); Khairi A. Hamdi (University of Manchester, United Kingdom)

Autonomous Relaying Scheme for Energy-Efficient Cooperative Multicast Communications

Liying Li (University of Electronic Science and Technology of China, P.R. China); Guodong Zhao (University of Electronic Science and Technology of China (UESTC), P.R. China); Wuyu Shi (University of Electronic Science and Technology of China, P.R. China); Zhi Chen

(University of Electronic Science and Technology of China & University of California, Riverside, P.R. China); Qi Zhang (Aarhus University, Denmark)

PHY28: Molecular Communications

Room: Salwa 1

Performance Comparison of Message Encoding Techniques for Bacterial Nanonetworks
Vitaly Petrov, Boya Deng, Dmitri Moltchanov, Sasitharan Balasubramaniam and Yevgeni Koucheryavy (Tampere University of Technology, Finland)

Demodulation of Reaction Shift Keying Signals in Molecular Communication Network with Protein Kinase Receiver Circuit
Hamdan Awan and Chun Tung Chou (University of New South Wales, Australia)

Offset Estimation for Clock Synchronization in Mobile Molecular Communication System
Zhan Luo and Lin Lin (Shanghai University, P.R. China); Maode Ma (Nanyang Technological University, Singapore)

Molecular Code Division Multiple Access in Nano Communication Systems
Yeganeh Zamiri-Jafarian (Queen's University, Canada); Saeed Gazor (Queens University, Canada); Hossein Zamiri-Jafarian (University of Toronto & Ferdowsi University of Mashhad, Canada)

Performance Analysis of Convolutionally-Coded Telegram Splitting Telemetry Systems under Different ISM/SRD Collision Behaviors
Tallal Elshabrawy (The German University in Cairo, Egypt); Joerg Robert (Friedrich-Alexander Universität Erlangen-Nürnberg, Germany); Sally Nafie (German University in Cairo, Egypt)

PHY29: mmWave Communications

Room: Salwa 3

MMSE Hybrid Precoder Design for Millimeter-Wave Massive MIMO Systems
Ruikai Mai (McGill University, Canada); Duy H. N. Nguyen (University of Texas, Austin, USA); Tho Le-Ngoc (McGill University, Canada)

Hybrid Precoding with Data Stream Adaptation for High Throughput mmWave MIMO Systems
Liang Zhou (Fujitsu Laboratories Ltd., Japan); Yoji Ohashi (Fujitsu, Japan)

An Efficient Beam Training Technique for mmWave Communication Under NLoS Channel Conditions
Wenfang Yuan, Simon Armour and Angela Doufexi (University of Bristol, United Kingdom)

Spectral Efficiency Analysis for Analog Beamforming in Millimeter Wave Communication
Hatem Abbas and Khairi A. Hamdi (University of Manchester, United Kingdom)

Non-Coherent FSK: An Attractive Modulation Set for Millimeter-Wave Communications
Ali A Nasir (National University of Sciences and Technology (NUST), Pakistan); Hani Mehrpouyan (Boise State University, USA); David W Matolak (University of South Carolina, USA); Salman Durrani (The Australian National University, Australia)

PHY30: Selected Topics in Communications II

Room: Dukhan

Planar Ultra-Wideband Elliptical Antenna for Communication Applications
Mousa Hussein and Ali Hakam (UAE University, UAE); Mohammed Ouda (Majmaah University, Saudi Arabia)

Power Performance Enhancement of Underlay Spectrum Sharing using Microstrip Patch ESPAR Antenna

Ahmad Abdalrazik (Port Said University, Egypt); Heba Soliman (Port-Said University, Egypt); Mohamed F. Abdelkader (Port Said University, Egypt); Tamer Abuelfadl (Cairo University, Egypt)

Millimeter-Wave Ultra-Wideband (UWB) Bandpass Filter (BPF) Using Microstrip Parallel Coupled Lines

Hussein Shaman (King Abdulaziz City for Science and Tecknology (KACST), Saudi Arabia); Ahmed AlAmoudi (King Abdulaziz City for Science and Technology, Saudi Arabia); Sultan Almorqi (King Abdulaziz City for Science and Technology (KACST), Saudi Arabia)

Enhancing Passive UHF RFID Backscatter Energy Using Chirp Spread Spectrum Signals and Channel Shortening

Taoufik Ben-Jabeur (Qatar University, Qatar); Abdullah Kadri (Qatar Mobility Innovations Center, Qatar); Khalifa Hazaa (Qatar University, Qatar)

Optimal Impersonation of CSI for Maximizing Leaked Information to Untrusted Relay in PLNC

Osamu Takyu and Kengo Matsumoto (Shinshu University, Japan); Takeo Fujii (The University of Electro-Communications, Japan); Tomoaki Ohtsuki (Keio University, Japan); Fumihito Sasamori and Shiro Handa (Shinshu University, Japan)

MAC 11: Energy-Efficient Resource Allocation

Room: PR5

Energy-Efficient Mode Selection and Power Control for Device-to-Device Communications

Dingzhu Wen, Guanding Yu and Lukai Xu (Zhejiang University, P.R. China)

Energy Efficiency Optimization for 2D Antenna Arrays in Self-Organizing Wireless Networks

Maciej Soszka (Vodafone Chair Mobile Communications Systems, Germany); Sascha Berger, Meryem Simsek and Gerhard Fettweis (Technische Universität Dresden, Germany)

Coordinated OVSF Code Allocation for Improved Sum Rate and Energy Efficiency in 3G Small Cells

Hanifa Nabuuma (University of Manchester, United Kingdom); Emad Alsusa (Manchester University, United Kingdom)

Queue-aware Energy-efficient Scheduling and Power Allocation in Small-cell Networks with Interference

Hongxin Wei, Limin Xiao, Yunzhou Li and Shidong Zhou (Tsinghua University, P.R. China)

Energy Efficient Resource Allocation for Heterogeneous Cloud Radio Access Networks With User Cooperation and QoS Guarantees

Yuan Zhang and Ying Wang (Beijing University of Posts and Telecommunications, P.R. China); Weidong Zhang (China Academy of Electronics and Information Technology, P.R. China)

NET20: Mobility Management in SDNs

Room: PR6

Forging Client Mobility with OpenFlow: an experimental study

Nikos Makris, Kostas Choumas and Christos Zarafetas (University of Thessaly, Greece); Thanasis Korakis (New York University, USA); Leandros Tassiulas (Yale University, USA)

Mobility Management for Low-Latency Handover in SDN-Based Enterprise Networks

Ce Chen, Yu-Ting Lin and Li-Hsing Yen (National Chiao Tung University, Taiwan); Min-Cheng Chan (National Chiao Tung University, USA); Chien-Chao Tseng (National Chiao-Tung

University, Taiwan)

SDN-Based Distributed Mobility Management for 5G Networks
Tien-Thinh Nguyen (EURECOM, France); Christian Bonnet (Institut Eurecom, France); Jérôme Härri (EURECOM, France)

OpenFlow-based Mobility Management scheme in Software Defined Networking
Pill-Won Park, Seong-Mun Kim and Sung-Gi Min (Korea University, Korea)

Mobility Management in Three-Tier SDN Architecture for DenseNets
Ibrahim Elgendi (Canberra University, Australia); Kumudu S Munasinghe (University of Canberra, Australia); Abbas Jamalipour (University of Sydney, Australia)

NET21: Media Streaming in Wireless Networks

Room: PR 7

Streaming Variable Bitrate Video Over Mobile Networks with Predictable Performance
Yan Liu and Jack Y. B. Lee (The Chinese University of Hong Kong, Hong Kong)

eTVSQ based Video Rate Adaptation in Cellular Networks With α -Fair Resource Allocation
Nagabhushan Eswara, Sumohana Channappayya and Abhinav Kumar (Indian Institute of Technology Hyderabad, India); Kiran Kuchi (IIT Hyderabad, India)

The Role of Multimedia Source Codecs in Green Cellular Networks
Andres Kwasinski (Rochester Institute of Technology, USA); Alexis Kwasinski (University of Texas, USA)

Design and Performance Impact of Long Cyclic Prefixes for eMBMS in LTE Networks
Ahmad Awada (Nokia Bell Labs, Germany); Mikko Säily (Nokia Bell Labs, Finland); Lauri Kuru (Nokia Solutions and Networks, Finland)

Impact of Chunk Duration on Adaptive Streaming Performance in Mobile Networks
Yu-Ting Lin (Orange Labs, France); Thomas Bonald (Telecom ParisTech, France); Salah Eddine Elayoubi (Orange Labs, France)

NET22: Resource Allocation and QoS Support

Room: PR 8

A QoS-Guaranteed Dynamic Two-Way Cooperation Approach in Cognitive Networks
Xinyu Fang (Shanghai Jiao Tong University, P.R. China); Can Tang (The Australian National University, Australia); Feilong Tang (Shanghai Jiao Tong University, P.R. China); Jie Li (University of Tsukuba, Japan); Wenchao Xu (East China Normal University, P.R. China); Minyi Guo (Shanghai Jiao Tong University, P.R. China)

A QoS Controlled Spectrum Switching Resource Allocation Technique for Cognitive Wi-Fi Networks
Samoda L Okanda Gamage, Jamil Y Khan and Duy T Ngo (The University of Newcastle, Australia)

Adaptive Modulation Transmission in High Speed Railway Environment with QoS Provisioning
Qian Gao (Beijing Jiaotong University, P.R. China); Gang Zhu (Electronics and Information College of Beijing Jiaotong University, P.R. China); Siyu Lin, Shichao Li and Xiong Lei (Beijing Jiaotong University, P.R. China)

A Dependency-Aware QoS System for Mobile Satellite Communication
Markus Brückner (Technische Universität Ilmenau, Germany); Philipp Driess (TU-Ilmenau, Germany); Manuel Osdoba and Andreas Mitschele-Thiel (Ilmenau University of Technology, Germany)

Scalability and Satisfiability of Quality-of-Information in Wireless Networks
Scott Rager (Pennsylvania State University, USA); Ertugrul Necdet Ciftcioglu (IBM Research, USA); Ram Ramanathan (BBN Technologies, USA); Tom La Porta (Pennsylvania State University, USA); Ramesh Govindan (University of Southern California, USA)

NET23: Cooperative Communications

Room: Cigar Lounge

Energy Efficient Antenna Selection for a MIMO Relay Using RF Energy Harvesting
Islam Samy (Qatar University, Egypt); M. Majid Butt (Trinity College Dublin, Ireland); Amr Mohamed (Qatar University, Qatar); Mohsen Guizani (QU, USA)

Cooperative and Collaborative Forwarding in Heterogeneous Mobile Opportunistic Networking
Adnan Noor Mian (Information Technology University, Pakistan); Abderrahmen Mtibaa (Texas A&M University, USA); Hussein Alnuweiri (Texas A&M University, Qatar); Farah Amjad (Information Technology University, Pakistan)

Sparsity-Aware Multiple Relay Selection in Large dual-hop Decode-and-Forward Broadband Relay Networks
Ala Gouissem and Ridha Hamila (Qatar University, Qatar); Naofal Al-Dhahir (University of Texas at Dallas, USA); Sebti Foufou (Qatar University, Qatar)

Graph-Based Path Selection and Power Allocation for Relay-Aided Transmission
Lu Lu, Dawei He and Qiqin Xie (Georgia Institute of Technology, USA); Geoffrey Li (Georgia Tech, USA); Xingxing Yu (Georgia Institute of Technology, USA)

Capacity Analysis of Dense Wireless Networks with Joint Optimization of Reservation and Cooperation
Yongping Zhang, Bo Li and Mao Yang (Northwestern Polytechnical University, P.R. China); Zhongjiang Yan (Northwestern Ploytechnical University, P.R. China)

APP 9: Smart Grids and Energy-Aware Protocols for UAV

Room: Ghazal

PMUs Placement with Max-Flow Min-Cut Communication Constraint in Smart Grids
Ali Gaber Mohamed Ali (Virginia Tech, USA); Karim G Seddik (American University in Cairo, Egypt); Ayman Y Elezabi (American University, Cairo, Egypt)

Flexible Charging and Discharging Algorithm for Electric Vehicles in Smart Grid Environment
Osama Aloqaily (University of Ottawa, Canada); Irfan S. Al-Anbagi (University of Regina, Canada); Dhaou Said (University of Ottawa & INTERLAB Research Laboratory, Canada); Hussein T Mouftah (University of Ottawa, Canada)

MK-AMI: efficient Multi-group Key management scheme for secure communications in AMI systems
Mourad Benmalek (Ecole Nationale Supérieure d'Informatique ESI (ex. INI), Algeria); Yacine Challal (University of Technology of Compiegne & Heudiasyc lab. UMR CNRS, France)

Network Connectivity and Area Coverage for UAV Fleet Mobility Model with Energy Constraint
Mohamed-Ayoub Messous (University of Bourgundy & DRIVE Lab, France); Sidi-Mohammed Senouci (University of Bourgogne - ISAT Nevers, France); Hichem Sedjelmaci (University of Bourgogne, DRIVE Lab, France)

Energy Efficient Path Planning Techniques for UAV-based Systems with Space Discretization

Shaimaa Ahmed (College of Computing and Information Technology, AAST, Egypt); Amr Mohamed (Qatar University, Qatar); Khaled A. Harras (Carnegie Mellon University, USA); Mohamed Kholief (Arab Academy of Science and Technology, Egypt); Saleh Mesbah (Saleh. Mesbah, Egypt)

Wednesday, April 6, 16:00 - 17:40

PHY31: Modulation and Coding

Room: Salwa 2

Automatic Modulation Classification Using Hierarchical Polynomial Classifier and Stepwise Regression
Ameen Abdelmutalab, Khaled Assaleh and Mohamed El-Tarhuni (American University of Sharjah, UAE)

Performance of Quadrature Spatial Modulation with Imperfect Channel Information over Correlated α - μ Fading Channels
Osamah S. Badarneh (University of Tabuk, Saudi Arabia); Raed Mesleh (German Jordan University, Jordan)

Capacity Bounds and Performance of Precoder Index Modulation
Yalagala Naresh (Indian Institute of Science, India); T. Lakshmi Narasimhan (National Instruments, Bangalore, India); A. Chockalingam (Indian Institute of Science, India)

A Direct-Code to Increase the Spectral Efficiency of Generalized Space Shift Keying Modulation
Nafel Alotaibi and Khairi A. Hamdi (University of Manchester, United Kingdom)

Feature based Modulation Classification using Multiple Cumulants and Antenna Array
Sai Huang, Zhiyong Feng, Yifan Zhang, Kezhong Zhang and Wei Li (Beijing University of Posts and Telecommunications, P.R. China)

PHY32: Space Time Block Codes

Room: Salwa 1

A Low-Complexity Sub-Optimal Decoder for OSTBC-Based Mobile Cooperative Systems
Yazid Khattabi and Mustafa Muhammad Matalgah (University of Mississippi, USA)

Implementing Differential Distributed Orthogonal Space Time Block Coding using Coefficient Vectors
Nnamdi Nwanekezie, Gbenga Owojaiye and Yichuang Sun (University of Hertfordshire, United Kingdom)

OSTBC Transmission over Cooperative Diversity Systems under Nodes Mobility Impact
Yazid Khattabi and Mustafa Muhammad Matalgah (University of Mississippi, USA)

Rateless Space Time Block Code for Antenna Failure in Massive MU-MIMO Systems
Ali H. Alqahtani (College of Telecommunication and Information Technology (CTI), Saudi Arabia); Ahmed Iyanda Sulyman and Abdulhameed Alsanie (King Saud University, Saudi Arabia)

Cognitive MIMO Quadrature Spatial Modulation Systems with Mutual Primary-Secondary Co-channel Interference
Islam Abu Mahady and Ali Afana (Lakehead University, Canada); Raed Mesleh (German Jordan University, Jordan); Salama Said Ikki (Lakehead University & Electrical Engineering Department, Canada); Ibrahem E. Atawi (University of Tabuk, Saudi Arabia)

PHY33: Selected Topics in Communications III

Room: Salwa 3

An Enhanced DCO-OFDM Scheme for Visible Light Communication System
Yang Yang, Zhimin Zeng and Caili Guo (Beijing University of Posts and Telecommunications, P.R. China)

Security-Reliability Analysis and Power Allocation in Multiuser SIMO Mixed RF/FSO Relay Networks
Ahmed Hassan Abd El-Malek (King Fahd University of Petroleum and Minerals, Saudi Arabia); Anas M. Salhab (King Fahd University of Petroleum & Minerals, Saudi Arabia); Salam A. Zummo (KFUPM, Saudi Arabia)

Digital Weighted Autocorrelation Receiver Using Channel Characteristic Sequences for Transmitted Reference UWB Communication Systems
Zhonghua Liang (Chang'an University, P.R. China); Xiaodai Dong (University of Victoria, Canada); Xiaojun Yang (Chang'an University, P.R. China); Huansheng Song (Chang'an University, P.R. China)

IR-UWB Detection and Fusion Strategies using Multiple Detector Types
Vijaya Parampalli Yajnanarayana and Satyam Dwivedi (KTH Royal Institute of Technology, Sweden); Peter Händel (Royal Institute of Technology, Sweden)

PHY34: Spectrum Sensing

Room: Dukhan

Energy Detection Based Spectrum Sensing over Enriched Multipath Fading Channels
Alireza Bagheri (New Jersey Institute of Technology, USA); Paschalis C. Sofotasios (Tampere University of Technology & Aristotle University of Thessaloniki, Finland); Theodoros Tsiftsis (Nazarbayev University & Technological Educational Institute of Central Greece, Kazakhstan); Khuong Ho Van (HoChiMinh City University of Technology, Vietnam); Michalis Loupis (Technological Educational Institute of Central Greece, Greece); S. Freear (University of Leeds, United Kingdom); Mikko Valkama (Tampere University of Technology, Finland)

An Accurate Multi-Stage Energy Detection Spectrum Sensing
Amr Shata (CWS Faculty of Engineering Cairo University, Egypt); Omar Nasr and Yasmine Fahmy (Cairo University, Egypt)

On the Performance of Spectrum Sensing Based on GLR for Full-Duplex Cognitive Radio Networks
Ahmed Badawy (Politecnico di Torino, Italy); Tamer Khattab and Tarek M. Elfouly (Qatar University, Qatar); Carla-Fabiana Chiasserini (Politecnico di Torino, Italy); Daniele Trinchero (Politecnico di Torino & iXem Labs, Italy)

On Cooperative Spectrum Sensing with Improved Energy Detector over Erroneous Control Channel
Narasimha Rao Banavathu and Mohammed Zafar Ali Khan (Indian Institute of Technology, Hyderabad, India)

On the Sensing Sample Size for the Estimation of Primary Channel Occupancy Rate in Cognitive Radio
Miguel López-Benítez (University of Liverpool, United Kingdom); Janne Lehtomäki (University of Oulu, Finland)

MAC 12: MAC Design 3

Room: PR5

Context-Aware Mobility Resource Allocation for QoE-Driven Streaming Services
Imen Triki, Majed Haddad and Rachid El-Azouzi (University of Avignon, France); Afef Feki (France Research Center, Huawei Technologies, France); Marouen Guechaoui (University of Avignon, France)

Efficient random access control scheme with reservation channel for QZSS short message SS-CDMA communication
Kei Ohya, Tomohide Takahashi and Suguru Kameda (Tohoku University, Japan); Hiroshi Oguma (National Institute of Technology, Toyama College, Japan); Akinori Taira, Noriharu Suematsu, Tadashi Takagi and Kazuo Tsubouchi (Tohoku University, Japan)

A Hybrid Collision Coordination-based Multiple Access Scheme for Super Dense Aerial Sensor Networks
Sotheara Say and Hikari Inata (Waseda University, Japan); Shigeru Shimamoto (Waseda University & Graduate School of Global Information and Telecommunication Studies, Japan)

Optimal Power Allocation and User Selection in Non-Orthogonal Multiple Access Systems
Soumendra Nath Datta (Nokia Networks - Bangalore, India); Suresh Kalyanasundaram (Nokia Networks, India)

Success Coverage Probability for Dynamic Resource Allocation in Small Cell Networks
Lei Li (BUPT, P.R. China); Mugen Peng (Beijing University of posts & Telecommunications, P.R. China); Zhipeng Yan (BUPT, P.R. China); Zhongyuan Zhao and Yong Li (Beijing University of Posts and Telecommunications, P.R. China)

NET24: D2D Communications

Room: PR6

Interference-Aware Resource Allocation for D2D Underlaid Cellular Network Using SCMA: A Hypergraph Approach
Yanpeng Dai, Min Sheng, Kepeng Zhao, Junyu Liu, Lei Liu and Jiandong Li (Xidian University, P.R. China)

Efficient Selection of Source Devices and Radio Interfaces for Green Ds2D Communications
Muhammad Ismail (Texas A&M University at Qatar, Qatar); Muhammad Zeeshan Shakir (Carleton University, Canada); Erchin Serpedin (Texas A&M University, USA); Khalid A. Qaraqe (Texas A&M University at Qatar, USA)

A Resource Allocation Scheme for Multiple Device-to-Device Multicasts in Cellular Networks
Ajay Bhardwaj and Samar Agnihotri (Indian Institute of Technology Mandi, India)

Discrete Location-aware Power Control for D2D Underlaid Cellular Networks
Wenping Chen (Beijing University of Posts and Telecommunications, P.R. China); Zebing Feng (Beijing University of Posts and Telecommunications & Wireless Technology Innovation Lab, P.R. China); Zhiyong Feng, Qixun Zhang and Baoling Liu (Beijing University of Posts and Telecommunications, P.R. China)

A Distributed Joint Power Control and Mode Selection Scheme for D2D Communication Underlaying LTE-A Networks
Ehsan Naghipour and Mehdi Rasti (Amirkabir University of Technology, Iran)

NET25: MIMO and Beamforming

Room: PR 7

Beam focusing antenna array technology for non-stationary mobility

Hind Zaaraoui (Orange labs & University of Avignon, France); Zwi Altman (Orange Labs, France); Eitan Altman (INRIA, France)

A Novel Hierarchical Channel State Information Measurement and Feedback Scheme in Massive MIMO Systems
Leiming Zhang (Huawei Technologies Co., Ltd., P.R. China); Jianghua Liu (Huawei Technologies Co. Ltd., P.R. China); Jiangguo Wang (Huawei Tecnologies Co., Ltd., P.R. China)

Efficient Beamforming in Multi-cell Multi-antenna Networks: Exploiting Network Duality
Haythem Bany Salameh (Yarmouk University, Jordan); Tha'er F. Hailat (Yarmouk, Greece)

Weighted MMSE Iterative Alignment Algorithm for Faster Convergence
Zhenzhe Sun (ZTE Corporation, P.R. China); Chengnian Long (Shanghai Jiao Tong University, P.R. China); Jian Lin and Qiongjie Lin (Georgia Institute of Technology, USA); Mary Ann Weitnauer (Georgia Tech, USA)

3-way Multi-carrier Asynchronous Neighbor Discovery Algorithm Using Directional Antennas
Siwen Zhao, Yunfeng Liu, Tuo Yang, Zhiyong Feng, Qixun Zhang and Chao Gao (Beijing University of Posts and Telecommunications, P.R. China)

NET26: DTNs and Opportunistic Communications

Room: PR 8

A Data Forwarding Scheme with Reachable Probability Centrality in DTNs
Jiagao Wu (Nanjng University of Posts and Telecommunications & University of Victoria, P.R. China); Jianming Wang and Linfeng Liu (Nanjing University of Posts and Telecommunications, P.R. China); Maryam Tanha and Jianping Pan (University of Victoria, Canada)

A Non-Cooperative File Caching for Delay Tolerant Networks: A Reward-based Incentive Mechanism
Sidi Ahmed Ezzahidi (University Mohamed V, Morocco); Essaid Sabir (ENSEM/UH2C, Morocco); Mohamed El Kamili (LIMS, Sidi Mohammed Ben Abdellah University, Fez, Morocco); Bouyakhf Houssine (Université Mohammed V Agdal, Morocco)

Social-Aware Data Forwarding through Scattered Caching in Disruption Tolerant Networks
HyunAe Kim and HyungJune Lee (Ewha Womans University, Korea)

Analytic Latency Model for Message Dissemination in Opportunistic Networks
Qi Wang (Southeast University, P.R. China); Sanfeng Zhang (School of Computer Science and Engineering, Southeast University, P.R. China)

Explore K-Anycast information dissemination in Mobile Opportunistic Networks
Peng Liu (Hangzhou Dianzi University & Temple University, P.R. China); Jia Xu and Biao Xu (Hangzhou Dianzi University, P.R. China)

NET27: Network Planning and Simulation

Room: Cigar Lounge

Adaptive Network Selection based on Attractor Selection in Data offloading
Zhiqun Hu, Zhaoming Lu, Zhaoxing Li and Xiangming Wen (Beijing University of Posts and Telecommunications, P.R. China)

Network planning tool based on network classification and load prediction
Seif eddine Hammami (Institute Mines-Telecom, Télécom SudParis, France); Hossam Afifi (Institut Telecom & Paris South, France); Michel Marot (Institut TELECOM Telecom SudParis, France); Vincent Gauthier (Institut TELECOM; Telecom SudParis; SAMOVAR UMR, France)

Simulating Dense Small Cell Networks

Pedro Alvarez (CTVR, Trinity College, Ireland); Carlo Galiotto (CTVR, Trinity College Dublin, Ireland); Jonathan van de Belt (Trinity College Dublin, Ireland); Danny Finn (Trinity College Dublin & CTVR Telecomunications Research Centre, Ireland); Hamed Ahmadi (University College Dublin, Ireland); Luiz DaSilva (Trinity College & Trinity College Dublin, Ireland)

Sensitivity Analysis of Small Cells and DAS Techno-economic Models in Mobile 5G

Christos J Bouras (University of Patras CTI&P-Diophantus & University of Patras, Greece); Anastasia Kollia (University of Patras, Greece); Andreas Papazois (University of Patras & GRNET S.A., Greece)

WiDiSi: A Wi-Fi Direct Simulator

Luciano Baresi (Politecnico di Milano, Italy); Naser Derakhshan (Politecnico di Milano & TELECOM Italia, Italy); Guinea Sam (Politecnico di Milano, Italy)

APP 10: QoE-QoS of Cellular Networks

Room: Ghazal

Towards Elastic Application-oriented Bearer Management for enhancing QoE in LTE Networks

Tarik Taleb (Aalto University, Finland); Konstantinos Samdanis (NEC Europe Ltd., Germany); Adlen Ksentini (University of Rennes 1 / IRISA Lab, France)

Service-oriented Resource Virtualization for Evolving TDD Networks Towards 5G

Salvatore Costanzo (University of Athens, Greece); Rudraksh Shrivastava and Konstantinos Samdanis (NEC Europe Ltd., Germany); Dionysis Xenakis (University of Athens, Greece); Xavier Costa Pérez (NEC Europe Ltd, Germany); David Grace (University of York, United Kingdom)

QoE Based Random Sleep-Awake Scheduling in Heterogeneous Cellular Networks

Abbas Farrokhi and Ozgur Ercetin (Sabanci University, Turkey)

QoE in 5G Cloud Networks using Multimedia Services

Muhammad Sajid Mushtaq (University of Paris-Est Creteil (UPEC) & Image, Signal and Intelligent Systems Laboratory-LISSI, France); Scott Fowler (Linköping University, Sweden); Brice Augustin (UPEC, University Paris-Est, France); Abdelhamid Mellouk (UPEC, University Paris-Est Creteil Val de Marne, France)

A Traffic-Driven Analysis for Small Cells Backhaul Planning

Btissam Er-rahmadi (University Rennes 1 & Orange Labs, France); Adlen Ksentini (University of Rennes 1 / IRISA Lab, France); Djamal-Eddine Meddour (Orange Labs, France)