2014 IEEE 25th Annual International Symposium on Personal, Indoor, and Mobile Radio Communication

(PIMRC 2014)

Washington, DC, USA
2-5 September 2014

Pages 1-737

IEEE Catalog Number: CFP14PIM-POD
ISBN: 978-1-4799-4911-3

Technical Program

WDN 1

Opening remarks
Emilio Calvanese Strinati (CEA-LETI, France)

[Keynote 1] 3GPP LTE Enhancements and 5G N/A
Satoshi Nagata (NTT DoCoMo, Inc., Japan)

An Averaged-LLR Group Detection for Higher Order MIMO System
Yuji Yokota and Hiroshi Ochi (Kyushu Institute of Technology, Japan)
pp. 2178-2182

WPT1

Welcome, Introduction & Peter Glaser Memorial Keynotes
Prof. Reza Zekavat, Michigan Technical University & Darel Preble Space Solar Power Institute

Welcome and Introduction to Current Challenges for WPT
Seyed (Reza) Zekavat (Michigan Technological University, USA)

Peter Glaser Memorial Address
Hiroshi Matsumoto-san (Kyoto University, Japan)

Solar Power Satellite Frequency Selection
James McSpadden (Raytheon, USA)

Harvesting Wireless Power: Survey of Energy-Harvester Conversion Efficiency in Far-Field, Wireless Power Transfer Systems
Christopher Valenta (Georgia Tech Research Insitute - Electro-optical Systems Laboratory, USA); Gregory Durgin (Georgia Tech, USA)

WPH1

Session 1

From WBAN Today to SmartBAN and Beyond (Keynote Talk)
John Farserotu (CSEM, Switzerland)

The EU COST IC1004 Perspective on Future Wireless Body Scenarios (Invited Talk)
Narcis Cardona (Universidad Politecnica Valencia, Spain)

Wearable Body-to-Body Networks for Critical and Rescue Operations - The CROW² Project
Elyes Ben Hamida (Qatar Mobility Innovations Center (QMIC), Qatar); Muhammad Mahtab Alam (Qatar Mobility Innovation Center, Qatar); Mickael Maman (CEA-Leti Minatec Campus, France); Benoit Denis (CEA-Leti Minatec, France); Raffaele D'Errico (CEA, LETI, Minatec Campus & Univ\. Grenoble-Alpes, France)
pp. 2145-2149

Uncoordinated Strategies for Inter-BAN Interference
Mehdi Alasti (Time Warner Cable, USA); Martina Barbi (National Institute of Standards and Technology (NIST), USA); Kamran Sayrafian (NIST, USA)
pp. 2150-2154

WDN 2

Spectral efficiency of Dynamic DAS with extreme downtilt antenna configuration
Syed Fahad Yunas and Mikko Valkama (Tampere University of Technology, Finland); Jarno Niemelä (Elisa Corporation, Finland)
pp. 2183-2188

Outdoor Millimeter-Wave Access for Heterogeneous Networks - Path Loss and System Performance
Richard J. Weiler and Michael Peter (Fraunhofer HHI, Germany); Wilhelm Keusgen (Fraunhofer Heinrich Hertz Institute, Germany); Hidekazu Shimodaira (Tokyo Institute of Technorogy, Japan); Gia Khanh Tran (Tokyo Institute of Technology, Japan); Kei Sakaguchi (Osaka University & Tokyo Institute of Technology, Japan)
pp. 2189-2193

A Proposal of WLAN Control Scheme Using Separated Channel
Minzhi Huang, Yuji Miyake, Suguru Kameda, Akinori Taira, Noriharu Suematsu, Tadashi Takagi and Kazuo Tsubouchi (Tohoku University, Japan)
pp. 2194-2198

WPT2

Antenna Theory and Practice for Power and Information Transfer
Christopher Valenta, Chao Zhang, Tim Cash, James Woods, ...

Simultaneous Wireless Information and Power Transfer with Co-Channel Interference
Lansheng Hu (Xi'an Jiaotong University, P.R. China); Chao Zhang (Xi'an Jiaotong University & National Mobile Communications Research Laboratory, Southeast University, P.R. China); Jing Xu (Xi'an Jiaotong University, P.R. China)
pp. 2125-2129

Antenna Theory, Design, and Demonstrations of the Role of Antennas in Wireless Power Transfer Application N/A
Timothy Cash (Optimal Solutions and Technologies, USA)

Using a Pico-satellite Paradigm to Verify and Validate SSP at a Low cost to first power N/A
James Woods (Silver High Energy, USA)

Panel Discussion on WPT Antenna Design N/A
Christopher Valenta (Georgia Tech Research Insitute - Electro-optical Systems Laboratory, USA); Timothy Cash (Optimal Solutions and Technologies, USA); James McSpadden (Raytheon, USA); James Woods (Silver High Energy, USA)

WPH2

Session 2

UWB Antenna and Propagation for Wireless Endoscopy
Kamya Yekeh Yazdandoost and Kenichi Takizawa (National Institute of Information and Communications Technology, Japan); Ryu Miura (NICT, Japan)
pp. 2155-2159

Ultra Wideband Propagation for Future In-Body Sensor Networks
Raúl Chávez-Santiago (Oslo University Hospital, Norway); Concepcion Garcia-Pardo (Universitat Politècnica de València & Institute of Telecommunications and Multimedia Applications (iTEAM), Spain); Alejandro Fornes-Leal and Ana Valles-Lluch (Universitat Politècnica de València, Spain); Ilangko Balasingham (Norwegian University of Science & Technology & Oslo University Hospital, Norway); Narcis Cardona (Universidad Politecnica Valencia, Spain)
pp. 2160-2163

Local frequency Offset Spatial Diversity with pi/4-DQPSK in Implant Communications
Daisuke Anzai, Takashi Koya and Jianqing Wang (Nagoya Institute of Technology, Japan)

pp. 2164-2167

Hardware Implementation of an IR-UWB Coordinator Node for WBAN Applications
Kasun Maduranga Silva Thotahewa, Jean-Michel Redouté and Mehmet Rasit Yuce (Monash University, Australia)
pp. 2168-2172

A Generic Wake-up Radio based MAC Protocol for Energy Efficient Short Range Communication
Heikki Karvonen (University of Oulu, Centre for Wireless Communications, Finland); Juha Petäjäjärvi, Jari Iinatti, Matti Hämäläinen and Carlos A Pomalaza-Ráez (University of Oulu, Finland)
pp. 2173-2177

WDN 3

[Keynote 2] Multi-radio Heterogeneous Networks within 5G Cellular Networks N/A
Konstantinos D Dimou (Intel Labs, USA)

Enhanced HMIPv6 with Cascaded Tunnel
Zhiwei Yan and Xiaodong Lee (CNNIC, P.R. China); Yong Jin Park (Waseda University, Japan)
pp. 2199-2203

A Novel Cell Selection Scheme Using Positioning Information for Heterogeneous Wireless System
Junpei Kuboniwa, Yuji Miyake, Suguru Kameda, Akinori Taira, Noriharu Suematsu, Tadashi Takagi and Kazuo Tsubouchi (Tohoku University, Japan)
pp. 2204-2208

WPT3

New Answers to Old Challenges for Space Solar Power
Tanwin Chang(Deep Phase Labs), Chengcheng Zhang(Beijing University of Posts & Telecommunications) and Melike Erol-Kantarci(University of Ottawa, Canada)

Over the Horizon Wireless Power Transmission, a Low-Cost Precursor for Space Solar Power
Tanwin Chang (Deep Phase Labs, USA); Stephen J Blank (New York Institute of Technology, USA); Paul Jaffe (NRL, USA)
pp. 2130-2134

Energy Efficiency Optimization of Simultaneous Wireless Information and Power Transfer System with Power Splitting Receiver
Chengcheng Zhang, Hui Zhao and Wenfang Li (Beijing University of Posts and Telecommunications, P.R. China); Kan Zheng (Beijing University of Posts&Telecommunications, P.R. China); Juwo Yang (Beijing University of Posts and Telecommunications (BUPT), P.R. China)
pp. 2135-2139

Challenges of Wireless Power Transfer for Prolonging User Equipment (UE) Lifetime in Wireless Networks
Melike Erol-Kantarci (Clarkson University, USA); Hussein Mouftah (University of Ottawa, Canada)
pp. 2140-2144

Panel Discussion on System Optimization for WPT lifetime optimization N/A
Melike Erol-Kantarci (Clarkson University, USA); Tanwin Chang (Deep Phase Labs, USA); Chengcheng Zhang (Beijing University of Posts and Telecommunications, P.R. China)

WDN 4

Cell Association Method for Multiband Heterogeneous Networks
Hidekazu Shimodaira (Tokyo Institute of Technorogy, Japan); Gia Khanh Tran and Kiyomichi Araki (Tokyo Institute of Technology, Japan); Kei Sakaguchi (Osaka University & Tokyo Institute of Technology, Japan); Shinobu Nanba (KDDI R&D Laboratories, Inc., Japan); Takahiro Hayashi (KDDI R&D Laboratories Inc., Japan); Satoshi Konishi (KDDI Corporation, Japan)

pp. 2209-2213

Panel session

Closing remarks
Mehdi Bennis (Centre of Wireless Communications, University of Oulu, Finland)

WPT4

Solar Energy for Today and Tomorrrow
Darel Preble, President, Space Solar Power Institute & Reza Zekavat Michigan Tech

Space Solar Power - Energy, Economy and Environmental Issues for Today and Tomorrow
Darel Preble (Space Solar Power Institute, USA)

NSF Investments in Solar Energy
Gregory Rorrer (National Science Foundation, USA)

Panel Discussion on Sustainable Solar Energy Policy and Investment in Renewable Energy Policy
Darel Preble (Space Solar Power Institute, USA); Gregory Rorrer (National Science Foundation, USA); Gail Tverberg (Space Solar Power Institute, USA)

P1: Plenary 1

P2: Plenary 2

PHY04: Limited / Implicit Feedback

Reliable Implicit Feedback Generation in Unsynchronized CoMP Transmission
Stanislaus Iwelski, Zijian Bai and Erfan Majeed (University of Duisburg-Essen, Germany); Guido Bruck (University of Duisburg Essen, Germany); Peter Jung (Universität Duisburg-Essen, Germany); Biljana Badic, Tobias Scholand and Rajarajan Balraj (Intel, Germany); Chun-hsuan Kuo (Intel Inc., USA)
pp. 1-5

Precoder design for space shift keying in MIMO systems with limited feedback
Ming-Chun Lee and Wei-Ho Chung (Academia Sinica, Taiwan); Ta-Sung Lee (National Chiao Tung University, Taiwan)
pp. 6-10

Combining Calibration Schemes on a Real-time Multiuser MIMO-OFDM System with Implicit Feedback
Hayato Fukuzono, Tomoki Murakami and Riichi Kudo (NTT Corporation, Japan); Shoko Shinohara (NTT, Japan); Yasushi Takatori (NTT Network Innovation Laboratories, Japan); Masato Mizoguchi (NTT, Japan)
pp. 11-15

A Joint Real Grassmannian Quantization Strategy for SISO IA with Limited Feedback
Wen Wu, Xu Li, Huarui Yin and Chen Zhang (University of Science and Technology of China, P.R. China); Guo Wei (University of Sci. & Tech. of China, P.R. China)
pp. 16-20

MIMO-OFDM Channel Feedback Based on Distributed Compressive Sensing: A New Perspective
Cheng Peng (CSIRO Computational Informatics, Australia); Zhuo Chen (CSIRO ICT Centre, Australia); Chang Kyung Sung (CSIRO, Australia)
pp. 21-26

PHY01: Physical Layer Security I

Compressive Sensing based Decryption Method for Covert CDD-OFDM Transmission
Yuhan Zheng (Beijing University of Posts and Telecommunications, P.R. China); Fei Qi (Beijing University of Posts and Telecommunication, P.R. China); Xinzhou Cheng (Beijing Telecom Planning and Designing Institute Co., Ltd., P.R. China); Xiao jun Jing (Collaborative, P.R. China); Hai Huang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 27-31

Robust Transmission for Simultaneous Wireless Information and Power Transfer Systems with Secrecy Constraints
Haiyang Zhang, Yongming Huang and Luxi Yang (Southeast University, P.R. China)
pp. 32-36

Joint Transceiver Design for Secure Communication with Power Transfer
Seungjae Jung (Korea Advanced Institute of Science and Technology (KAIST), Korea); Seongah Jeong (Korea Advanced Institute of Science, Korea); Joonhyuk Kang (KAIST, Korea)
pp. 37-41

Opportunistic User Selection with Adaptive Jamming for Secure Communication in Heterogeneous Networks
Inkyu Bang (Korea Advanced Institute of Science and Technology, Korea); Su Min Kim (Korea Polytechnic University, Korea); Dan Keun Sung (Korea Advanced Institute of Science and Technology, Korea)
pp. 42-46

Creating Secure Wireless Regions using Configurable Beamforming
Yuanrui Zhang (Queen's University Belfast & ECIT, United Kingdom); Alan Marshall (University of Liverpool, United Kingdom); Roger Woods (Queens University Belfast, United Kingdom); Youngwook Ko (Queen's University Belfast, United Kingdom)
pp. 47-52

PHY02: Channel Modelling and Simulation I

Statistical Path Loss Model for Dynamic Off-Body Channels
Michal Mackowiak (INOV-INESC / IST - University of Lisbon, Portugal); Luis M. Correia (IST - University of Lisbon & INOV-INESC, Portugal)
pp. 53-57

On the Design of an Optical Wireless Link for Small Cell Backhaul Communication and Energy Harvesting
John Fakidis (The University of Edinburgh, United Kingdom); Muhammad Ijaz (University of Edinburgh, United Kingdom); Stepan Kucera (Bell Labs, Alcatel-Lucent Ltd., Ireland); Holger Claussen (Bell Labs, Alcatel-Lucent, Ireland); Harald Haas (The University of Edinburgh, United Kingdom)
pp. 58-62

Vehicle-to-Vehicle Radio Channel Characterization in Urban Environment at 2.3 GHz and 5.25 GHz
Antti Roivainen (Centre for Wireless Communications, Finland); Laddu Praneeth Roshan Jayasinghe (University of Oulu, Finland); Juha Meinilä (Elektrobit Corporation, Finland); Veikko Hovinen (University of Oulu, Finland); Matti Latva-aho (UoOulu, Finland)
pp. 63-67

Industrial Indoor Multipath Propagation - A Physical-Statistical Approach
Michael Cheffena (Gjøvik University College, Norway)
pp. 68-72

Statistics of the Product of Arbitrary alpha-mu Variates with Applications
Elvio J Leonardo (State University of Maringa (UEM), Brazil); Michel Daoud Yacoub (State University of Campinas, Brazil)
pp. 73-76

MWN3: Dynamic spectrum management

Beyond eICIC-Two-dimensional Resource Pattern Optimization for Macro-Femto Interference Avoidance
Peng Liu, Jiandong Li, Hongyan Li and Yun Meng (Xidian University, P.R. China)
pp. 1180-1184

AP Cooperative Diversity in Wireless Network Using Interference-Aware Channel Segregation Based Dynamic Channel Assignment
Martin T. H. Sirait, Yuki Matsumura and Katsuhiro Temma (Tohoku University, Japan); Koichi Ishihara and B. A. Hirantha Sithira Abeysekera (NTT Corporation, Japan); Tomoaki Kumagai (ATR, Japan); Fumiyuki Adachi (Tohoku University, Japan)
pp. 1185-1189

SVD Based Wideband Spectrum Sensing and Carrier Aggregation for LTE-Advanced Networks
Shaoyi Xu (Beijing Jiaotong University, P.R. China); Kyung Sup Kwak (Inha University, Korea); Ramesh Rao (University of California at San Diego, USA)
pp. 1190-1194

Uplink Interference Mitigation for "Dead Zone" Problem in Closed Access Femtocell Networks
Weilong Ren, Sihai Zhang and Wuyang Zhou (University of Science and Technology of China, P.R. China)
pp. 1195-1199

Dynamic Spectrum Leasing Strategies for Coordinated Cognitive Radio Networks with Delay-Tolerant Traffic
Mario A. Ramírez-Reyna (CINVESTAV-IPN, Mexico); Felipe A. Cruz-Pérez (Cinvestav-IPN, Mexico); Mario E. Rivero-Angeles (Instituto Politecnico Nacional & CIC-IPN, Mexico); Genaro Hernandez-Valdez (UAM-A, Mexico)
pp. 1200-1205

MWN4: Cognitive radio networks 1

Operating Characteristics of Underlay Cognitive Relay Networks
Ankit Kaushik (Karlsruhe Institute of Technology, Germany); Ralph Tanbourgi (Karlsruhe Institute of Technology (KIT), Germany); Friedrich K. Jondral (Karlsruhe Institute of Technology, Germany)
pp. 1206-1210

Distributed Spectrum Trading in Multiple-Seller Cognitive Radio Networks
Li-Chuan Tseng (MediaTek Inc., Taiwan); Feng-Tsun Chien (National Chiao Tung University, Taiwan); Ronald Y. Chang and Wei-Ho Chung (Academia Sinica, Taiwan)
pp. 1211-1216

Combinatorial Auction based Routing in Multi-Channel Cognitive Radio Networks
Enas Khairullah and Mainak Chatterjee (University of Central Florida, USA)
pp. 1217-1222

An Efficient Spectrum Sensing Algorithm for Cognitive Radio Based on Finite Random Matrix
Fuhui Zhou and Zan Li (Xidian University, P.R. China); Jiangbo Si (Xidian, P.R. China); Lei Guan (Xidian University, P.R. China)
pp. 1223-1227

Robust Energy Detection for Cognitive Radio
Yonghong Zeng and Meng Wah Chia (Institute for Infocomm Research, Singapore)
pp. 1228-1232

MAC01: Cognitive Radio MAC - 1

Spectrum Sharing for Cognitive Two-Way Relaying: Superposition Coding Versus Time Division
Yong Li, Tingting Wang and Xiang Zhang (Beijing University of Posts and Telecommunications, P.R. China); Mugen Peng (Beijing University of posts & Telecommunications, P.R. China); Wenbo Wang (Beijing University of Posts and Telecommunications, P.R. China)

pp. 937-941

On the Stable Throughput of Cooperative Cognitive Radio Networks with Finite Relaying Buffer
Adel M. Elmahdy and Amr El-Keyi (Nile University, Egypt); Tamer ElBatt (Faculty of Engineering, Cairo University & WINC, Nile University, Egypt); Karim G Seddik (American University in Cairo & Alexandria University, Egypt)
pp. 942-946

Spectrum map aided multi-channel multi-hop routing in distributed cognitive radio networks
Saptarshi Debroy (University of Missouri-Columbia, USA); Mainak Chatterjee (University of Central Florida, USA)
pp. 947-952

Cooperative Cognitive Relaying Under Primary and Secondary Quality of Service Satisfaction
Ahmed El Shafie (University of Texas at Dallas, USA); Tamer Khattab (Qatar University, Qatar)
pp. 953-958

Performance evaluation of primary-secondary reliable resource-management in vehicular networks
Nicola Cordeschi (''Sapienza'' University of Rome, Italy); Danilo Amendola, Mohammad Shojafar and Enzo Baccarelli (Sapienza University of Rome, Italy)
pp. 959-964

PHY03: Power Efficient Communications

Digital Predistortion with automatic determination of the Crest Factor Reduction gain, Principle and Experimental Validation
Amadou Tidiane Mbaye (Signal Processing and Telecommunications ESIEE-Paris, France); Geneviève B. Baudoin (ESIEE, France)
pp. 77-80

Minimizing the Energy per Bit for Pilot-Assisted Data Transmission over Quantized Channels
Qing Bai and Ulrich Mittmann (Technische Universität München, Germany); Amine Mezghani and Josef A. Nossek (TU Munich, Germany)
pp. 81-85

Standards-Compliant Energy-Saving Schemes for Downlink LTE/LTE-Advanced Networks
Zecai Shao (China Mobile Research Institute, P.R. China); Kun Guo and Min Sheng (Xidian University, P.R. China); Sen Bian (China Mobile Research Institute, P.R. China); Yan Zhang (Xidian University, P.R. China); Jinwei He (China Mobile Research Institute, P.R. China); Yuzhou Li (Xidian University, P.R. China); Chih-Lin I (China Mobile Research Institute, P.R. China)
pp. 86-90

High-Fidelity Energy-Efficient Machine-to-Machine Communication
Chih-Hua Chang and Ronald Y. Chang (Academia Sinica, Taiwan); Hung-Yun Hsieh (National Taiwan University, Taiwan)
pp. 91-96

Power Control Optimization for Tone Reservation based PAPR reduction algorithms
Ralph Mounzer (INSA-Rennes, France); Youssef Nasser (American University of Beirut, Lebanon); Matthieu Crussière (IETR - Electronics and Telecommunications Research Institute of Rennes (IETR) & INSA - National Institute of Applied Sciences, France); Jean-François Hélard (IETR, France)
pp. 97-102

MWN1: Ad hoc and body area networks

Enhanced Associativity-Based Multicast Routing Protocol in CR Mobile Ad hoc Networks
Yan Sun (Queen Mary University of London, United Kingdom); Fenyu Jiang and Tao Liang (Queen Mary University of London, P.R. China); Chris Phillips (Queen Mary University of London, United Kingdom)
pp. 1233-1237

A Network Cost Function for Clustered Ad Hoc Networks: Application to Group-Based Systems
Raphael Massin (Thales Communications & Security, France); Christophe J. Le Martret (Thales Communications & Security & Signal Processing and Multimedia Dept., France); Philippe Ciblat (Telecom ParisTech, France)
pp. 1238-1242

Throughput Capacity of Two-Hop Relay MANETs under Finite Buffers
Jia Liu, Min Sheng, Yang Xu, Hongguang Sun and Xijun Wang (Xidian University, P.R. China); Xiaohong Jiang (Future University-Hakodate, Japan)
pp. 1243-1248

Rethinking the Achievable Throughput Formulation of Cognitive Radio Ad Hoc Networks
Hongyu Ma (Beijing University of Posts and Telecomunications, P.R. China); Kai Niu and Weiling Wu (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1249-1253

On-body and Off-body Transmit Power Control in IEEE 802.15.6 Scheduled Access Networks
Fabio Di Franco (Università degli Studi di Palermo, Italy); Yu Ge (Institute for Infocomm Research, Singapore); Ilenia Tinnirello (University of Palermo, Italy)
pp. 1254-1258

MWN2: Wireless sensor networks 1

Simulation of Network-Level Performance for Bluetooth Low Energy
Konstantin Mikhaylov (University of Oulu, Finland)
pp. 1259-1263

Accelerated Connection Establishment (ACE) Mechanism for Bluetooth Low Energy
Konstantin Mikhaylov (University of Oulu, Finland)
pp. 1264-1268

On-Demand Energy Replenishment for Sensor Networks via Wireless Energy Transfer
Wenzheng Xu (Sun Yat-Sen University, The Australian National University, P.R. China); Weifa Liang and Xiaojiang Ren (The Australian National University, Australia); XiaoLa Lin (Sun Yat-Sen University, P.R. China)
pp. 1269-1273

Exploiting Mobility for Quality-Maximized Data Collection in Energy Harvesting Sensor Networks
Xiaojiang Ren and Weifa Liang (The Australian National University, Australia)
pp. 1274-1278

Preventing Alarm Storms in WSNs Anomaly Detection Applications
Alexandre Mouradian (Université de Lyon, France); Xuan Linh Nguyen and Isabelle Augé-Blum (CITI, INSA Lyon, France)
pp. 1279-1283

PHY08: Millimeter Wave Communication

Design Criteria on a mmWave-based Small Cell with Directional Antennas
Taehoon Kim, Inkyu Bang and Dan Keun Sung (Korea Advanced Institute of Science and Technology, Korea)
pp. 103-107

System Level Modeling and Performance of an Outdoor mmWave Local Area Access System
Timothy A. Thomas (Nokia, USA); Frederick W. Vook (Nokia Solutions and Networks, USA)
pp. 108-112

Reliable RF Beamforming for Millimeter Wave MIMO-OFDM Systems
Yahia R. Ramadan (Faculty of Engineering, Cairo University, Egypt); Ahmed S. Ibrahim (InterDigital Communications Inc., USA); Mohamed Khairy (Elec. and Comm. Dept., Faculty of Eng., Cairo Univ, Egypt)
pp. 113-117

Low Complexity Transceivers in Multiuser Millimeter-Wave Beamspace-MIMO Systems
Pierluigi Vito Amadori (University College of London, United Kingdom); Christos Masouros (University College London, United Kingdom)
pp. 118-122

Multiuser Hybrid Beamforming for Max-Min SINR Problem under 60 GHz Wireless Channel
Nanxi Li, Zaixue Wei, Jian Geng, Lin Sang and Dacheng Yang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 123-128

PHY05: Physical Layer Security II

Full-Duplex Relay with Jamming Protocol for Improving Physical-Layer Security
Saeedeh Parsaeefard and Tho Le-Ngoc (McGill University, Canada)
pp. 129-133

Reciprocity-Diversity Trade-off in Quantization for Secret Key Generation
Iulia Tunaru and Benoit Denis (CEA-Leti Minatec, France); Bernard Uguen (University of Rennes I, France)
pp. 134-138

User Cooperation Analysis under Eavesdropping Attack: A Game Theory Perspective
Hao Niu (The University of Tokyo, Japan); Li Sun (Xi'an Jiaotong University, P.R. China); Masaki Ito (The University of Tokyo, Japan); Kaoru Sezaki (University of Tokyo, Japan)
pp. 139-144

Secrecy Outage in Correlated Nakagami-m Fading Channels
Weigang Liu (The University of Edinburgh, United Kingdom); Satyanarayana Vuppala (Jacobs University, Germany); Giuseppe Abreu (Jacobs University Bremen, Germany); Tharmalingam Ratnarajah (The University of Edinburgh, United Kingdom)
pp. 145-149

Energy Efficiency in Fading Relay Channels under Secrecy and QoS Constraints
Mustafa Ozmen, Chuang Ye, M. Cenk Gursoy and Senem Velipasalar (Syracuse University, USA)
pp. 150-154

PHY06: Channel Modelling and Simulation II

Semi-Deterministic Modeling of Diffuse Scattering Component Based on Propagation Graph Theory
Li Tian (Tongji University & University of Bologna, P.R. China); Vittorio Degli-Esposti and Enrico M. Vitucci (University of Bologna, Italy); Xuefeng Yin (Tongji University, P.R. China); Francesco Mani (CEA-LETI, France); Xiaofeng Lu (Huawei Technology Company, P.R. China)
pp. 155-160

MIMO Channel Characterization over Random Rough Dielectric Terrain
Amir Torabi and Seyed (Reza) Zekavat (Michigan Technological University, USA)
pp. 161-165

Ray Tracing Results for Elevation Angle Spread of Departure and its Impact on System Performance
Bishwarup Mondal (Nokia Siemens Networks, USA); Timothy A. Thomas (Nokia, USA); Huan Cong Nguyen (Aalborg University & Faculty of Engineering and Science, Denmark); Eugene Visotsky (Nokia Siemens Networks, USA); Frederick W. Vook (Nokia Solutions and Networks, USA)
pp. 166-171

On the Directional Reciprocity of Uplink and Downlink Channels in Frequency Division Duplex Systems
Sahar Imtiaz, Ghassan S Dahman, Fredrik Rusek and Fredrik Tufvesson (Lund University, Sweden)
pp. 172-176

Slicing the Shadowing Uncertainty: A Measurement-Based Critical Study of Spatially Correlated Gaussian Models of Shadow Fading
Nikos Perpinias, Alexandros Palaios, Janne Riihijärvi and Petri Mähönen (RWTH Aachen University, Germany)
pp. 177-182

MWN7: Future wireless networks 1

An integrated approach for future mobile network architecture
Zainab Zaidi and Vasilis Friderikos (King's College London, United Kingdom); Muhammad Ali Imran (University of Surrey, United Kingdom)
pp. 1284-1288

Radio Network Energy Performance of Massive MIMO Beamforming Systems
Pål Frenger (Ericsson Research, Ericsson AB, Sweden); Magnus Olsson (Ericsson Research, Sweden); Erik Eriksson (Ericsson AB, Sweden)
pp. 1289-1293

Flow processing-aware Controller Placement in Wireless DenseNets
Sébastien Auroux and Holger Karl (University of Paderborn, Germany)
pp. 1294-1299

A Clean Slate Radio Network Designed for Maximum Energy Performance
Pål Frenger (Ericsson Research, Ericsson AB, Sweden); Magnus Olsson (Ericsson Research, Sweden); Erik Eriksson (Ericsson AB, Sweden)
pp. 1300-1304

Energy-Efficient User Relaying Scheme in Metropolitan mmWave Mobile Broadband System
JoonSan Kim and Seonghwa Yun (Korea Advanced Institute of Science and Technology, Korea); Seung Hyun Jeon (KAIST, Korea); Ae-Soon Park (ETRI, Korea); Jun Kyun Choi (KAIST, Korea)
pp. 1305-1309

SAB01: Streaming

Impact of End-user Playout Buffer Dynamics on HTTP Progressive Video QoE in Wireless Networks
Fange Yu, Huifang Chen and Lei Xie (Zhejiang University, P.R. China); Jie Li (University of Tsukuba, Japan)
pp. 1996-2001

Optimizing Playback Delay for Multiuser Video Streaming
Mehmet Ozfatura (Sabancı University, Turkey); Ozgur Ercetin (Sabanci University, Turkey); Hazer Inaltekin (Antalya International University, Turkey)
pp. 2002-2007

A fuzzy controller for rate adaptation in MPEG-DASH clients
Dimitrios J. Vergados (University of Patras, Greece); Angelos Michalas (Technological Education Institute of Western Macedonia, Greece); Angeliki Sgora and Dimitrios D. Vergados (University of Piraeus, Greece)
pp. 2008-2012

Energy Consumption Anatomy of Live Video Streaming from a Smartphone
Swaminathan Vasanth Rajaraman (Aalto University, School of Science, Finland); Matti Siekkinen (Aalto University, Finland); Mohammad Hoque (University of Helsinki, Finland)
pp. 2013-2017

Representative Service Based Quality of Experience Modeling for Instant Messaging Service
Xiaofeng Xin, Wei Wang, Aiping Huang and Hangguan Shan (Zhejiang University, P.R. China)
pp. 2018-2023

MAC02: Energy-efficient MAC and Resource Management - 1

Energy-Aware User Scheduling for Downlink Multiuser-MIMO Systems
Javier Rubio and Antonio Pascual-Iserte (Universitat Politècnica de Catalunya, Spain)
pp. 965-969

Joint Discontinuous Transmission and Power Control for High Energy Efficiency in Heterogeneous Small Cell Networks
Aolin Cheng (Beijing University of Posts and Telecommunications, P.R. China); Hao Jin (Beijing University of Posts and Telecommunications & Wireless Signal Processing and Network Laboratory, P.R. China); Jian Li and Yuling Yu (Beijing University of Posts and Telecommunications, P.R. China); Mugen Peng (Beijing University of posts & Telecommunications, P.R. China)
pp. 970-975

Energy-Efficient Cell Selection and Resource Allocation in LTE-A Heterogeneous Networks
Jui-Hung Chu, Kai-Ten Feng and Tain-Sao Chang (National Chiao Tung University, Taiwan)
pp. 976-980

Energy-efficient utility-based resource allocation in OFDMA systems
Haina Ye (Beijing Jiaotong University, P.R. China); Zhenhui Tan (Beijing JiaoTong University, Beijing, P.R. China)
pp. 981-985

Attenuators Enable Inversely Proportional Transmission Power and Carrier Sense Threshold Setting in WLANs
Daichi Okuhara, Fumiya Shiotani, Koji Yamamoto, Takayuki Nishio and Masahiro Morikura (Kyoto University, Japan); Riichi Kudo and Koichi Ishihara (NTT Corporation, Japan)
pp. 986-990

PHY07: Multi-Antenna Signal Processing I

Linear Precoder Based on Minimum Euclidean Distance for Multicast Channels
Zhiyong Chen, Xiaodong Xu and Yufeng Zhao (University of Science and Technology of China, P.R. China)
pp. 183-187

Low-Complexity Detectors for Spatially-Modulated MIMO Systems
Wen-Rong Wu and Chun-Tao Lin (National Chiao Tung University, Taiwan); Liu Chia-Yu (NCTU, Taiwan)
pp. 188-192

Antenna splitting in a distributed antenna system for a multiuser MIMO transmission
Yuki Nakanishi, Toshihiko Nishimura, Takeo Ohgane and Yasutaka Ogawa (Hokkaido University, Japan); Yusuke Ohwatari and Yoshihisa Kishiyama (NTT DOCOMO, INC., Japan)
pp. 193-197

Min-Max MSE Transceiver with Switched Preprocessing for MIMO Interference Channels
Ming-Min Zhao and Yunlong Cai (Zhejiang University, P.R. China); Benoit Champagne (McGill University, Canada); Minjian Zhao (Zhejiang University, P.R. China)
pp. 198-202

Adaptive Channel Regularization for Multiuser Multiantenna Downlink
S. Morteza Razavi and Tharmalingam Ratnarajah (The University of Edinburgh, United Kingdom)
pp. 203-207

MWN5: LTE/LTE-A 1

Performance Analysis of LTE and Wi-Fi in Unlicensed Band Using Stochastic Geometry
Abhijeet Bhorkar (INTEL Corporation, USA); Christian Ibars and Pingping Zong (Intel Corporation, USA)
pp. 1310-1314

A novel traffic generation framework for LTE network evolution study
Ziqi Zhang (Beijing Jiaotong University, P.R. China); ZhuYan Zhao and Hao Guan (Nokia Siemens Networks, P.R. China); Daniela Laselva (Nokia Siemens Networks, Denmark); Dong Ik Park (Nokia Solutions and Networks, Korea); Kyung Min Hwang (LG Uplus of Korea Republic, Korea); Dae Hee Kim (LG Uplus, Korea); Zhenhui Tan (Beijing JiaoTong University, Beijing, P.R. China)
pp. 1315-1320

Data Mining Framework for Random Access Failure Detection in LTE Networks
Sergey Chernov (University of Jyväskylä, Finland); Fedor Chernogorov (Magister Solutions Ltd. & University of Jyvaskyla, Finland); Dmitry Petrov (Magister Solutions Ltd., Finland); Tapani Ristaniemi (University of Jyväskylä, Finland)
pp. 1321-1326

Joint Component Carrier and Antenna Allocation for Heterogeneous Network in LTE-A System
Yi-Hsiu Lee (National Chiao Tung University, Taiwan); Chih-min Yu (Chung Hua University, Taiwan); Kai-Ten Feng and Jia-Shi Lin (National Chiao Tung University, Taiwan)
pp. 1327-1331

Interference Mitigation in Two-Tier LTE Networks: Does Power Control Pay Off for Femtocells?
Andra M. Voicu, Ljiljana Simić and Marina Petrova (RWTH Aachen University, Germany)
pp. 1332-1337

MWN6: Congestion, load and admission control

Modeling and Analysis of Uplink-Downlink Relationship in Heterogeneous Cellular Network
Hao Xu (Beijing University of Posts and Telecommunications, P.R. China); Chang Yongyu (Beijing University of Posts & Telecommunications, P.R. China); Tengxiao Sun (Beijing University of Posts and Telecommunications, P.R. China); Daixu Zheng (Beijing University of Posts and Telecommunication, P.R. China); Dacheng Yang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1338-1342

IEEE 802.11 Wi-Fi Access Point Localization with Angular Signal Strength Information
Andreas Achtzehn, Martin Gritzan, Marina Petrova and Petri Mähönen (RWTH Aachen University, Germany)
pp. 1343-1347

Partial Mobile Data Offloading with Load Balancing in Heterogeneous Cellular Networks Using Software-Defined Networking
Xiaoyu Duan and Xianbin Wang (Western University, Canada); Auon Muhammad Akhtar (University of Western Ontario, Canada)
pp. 1348-1353

Bandwidth Estimation in Mobile Networks by Busy Period Detection
Zoltán Móczár and Sándor Molnár (Budapest University of Technology and Economics, Hungary)
pp. 1354-1358

Q-Learning-based Prediction of Channel Quality after Handover in Mobile Networks
Zdenek Becvar and Pavel Mach (Czech Technical University in Prague, Czech Republic); Emilio Calvanese Strinati (CEA-LETI, France)
pp. 1359-1364

PHY12: Millimeter Wave Channel Models

28-GHz Indoor Channel Measurements and Analysis of Propagation Characteristics
Mingyang Lei and Jianhua Zhang (Beijing University of Posts and Telecommunications, P.R. China); Tian Lei (Beijing University of Posts and Telecommunications & Wireless Technology Innovation Institute, P.R. China); Detao Du (Beijing University of Posts and Telecommunications, P.R. China)
pp. 208-212

Performance measurement of broadband simple decoding in short-range MIMO
Ken Hiraga, Kazumitsu Sakamoto and Tomohiro Seki (NTT, Japan); Toshimitsu Tsubaki (NTT Network Inovation Laboratories, Japan); Hideki Toshinaga (NTT, Japan); Tadao Nakagawa (NTT Corporation, Japan)
pp. 213-216

Scattering Effect Based on Measurements of Reflection Coefficients at 60 GHz in an Underground Mine Gallery
Shah Ahsanuzzaman Md Tariq (Université de Montréal-École Polytechnique de Montréal & Poly-Grames Research Center, Canada); Charles Despins (Prompt, Canada); Sofiene Affes (INRS-EMT, Canada); Chahe Nerguizian (Ecole Polytechnique, Canada)
pp. 217-221

A Novel Dual-Slope mm-Wave Channel Model Based on 3D Ray-Tracing in Urban Environments
Youngbin Chang (Samsung Electronics Co., Ltd, Korea); Sangkyu Baek (Samsung Electronics, Co., Ltd., Korea); Sooyoung Hur (Samsung Electronics & HQ Korea, Korea); Youngjoong Mok and Youngju Lee (Samsung Electronics, Korea)
pp. 222-226

Omnidirectional Path Loss Models in New York City at 28 GHz and 73 GHz
George R MacCartney, Jr. (NYU WIRELESS & NYU-Poly, USA); Mathew Samimi (NYU WIRELESS, USA); Theodore Rappaport (New York University & NYU WIRELESS, USA)
pp. 227-231

PHY09: Physical Layer Network Coding

Inter-Symbol-Interference Cancelation in Time-domain Physical-Layer Network Coding with fractional delay
Yixin Li and Fu-Chun Zheng (The University of Reading, United Kingdom); Yanxiang Jiang (Southeast University, P.R. China)
pp. 232-236

A practical implementation of Computation Codes for computing sums
Aitziber Saez and Xabier Insausti (CEIT, Spain); Pedro M. Crespo (CEIT and TECNUN (University of Navarra), Spain)
pp. 237-241

Beamforming and Relay Selection Schemes for Multi-Antenna Two-Way Relaying Systems with Physical Network Coding
Youngil Jeon (Electronics and Telecommunications Research Institute, Korea); Sung-Hyun Moon (ETRI, Korea); Gosan Noh and Youn Ok Park (Electronics and Telecommunications Research Institute, Korea)
pp. 242-246

Synchronization Analysis of Physical-layer Network Coding in LTE System
Xiaoli Wang (Docomo Beijing Communications Lab, P.R. China); Qun Zhao (DoCoMo Beijing Labs, P.R. China)
pp. 247-252

LDPC Coded Soft Forwarding with Network Coding for the Two-Way Relay Channel
Dushantha Nalin K. Jayakody (University of Tartu, Estonia); Jun Li (University of Sydney, Australia); Mark F. Flanagan (University College Dublin, Ireland)
pp. 253-257

PHY10: Positioning, Localisation, and Tracking Techniques

Studying and Mitigating the Impact of GPS Localization Error on Radio Environment Map Construction
Alexandros Palaios, Sathishkumar Jagadeesan, Nikos Perpinias, Janne Riihijärvi and Petri Mähönen (RWTH Aachen University, Germany)
pp. 258-263

Cooperative RF Pattern Matching Positioning for LTE Cellular Systems
Reza Monir Vaghefi and Michael Buehrer (Virginia Tech, USA)
pp. 264-269

Traffic Hotspot localization in 3G and 4G wireless networks using OMC metrics
Aymen Jaziri (Orange Labs & Telecom Sudparis and UPMC, France); Ridha Nasri (Orange Labs, France); Tijani Chahed (Telecom SudParis, France)
pp. 270-274

Cooperative Localization of Mobile Nodes in NLOS
Siamak Yousefi (McGill University, Ireland); Xiao-Wen Chang and Benoit Champagne (McGill University, Canada)
pp. 275-279

Measurement and Analysis of NLOS Identification Metrics for WLAN Systems
Ebtesam Almazrouei (Khalifa University, UAE); Nayef Alsindi (Etisalat-British Telecommunications Innovation Centre (EBTIC), UAE); Saleh Al-Araji (Khalifa University of Science, Technology and Research, UAE); Nazar Ali (Khaifa University, UAE); Zdenek Chaloupka (Etisalat BT Innovation Centre, UAE); James Aweya (Etisalat British Telecom Innovation Center/Khalifa University, UAE)
pp. 280-284

MWN10: Cooperative communications

User-Cooperation Scheme based on Clustering for Energy Efficiency in Cellular Networks with D2D Communication
ChulHee Choi and Sungjin Park (KAIST, Korea); Dong-Ho Cho (Korea Advanced Institute of Science and Technology, Korea)
pp. 1365-1369

Joint Data Assignment and Beamforming for Backhaul Limited Caching Networks
Xi Peng (The Hong Kong University of Science and Technology, Hong Kong); Juei Chin Shen (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)
pp. 1370-1374

Interference and Throughput Analysis of Uplink User-Assisted Relaying in Cellular Networks
Hussain Elkotby and Mai Vu (Tufts University, USA)
pp. 1375-1380

Radio Access Virtualization: Cell follows User
Keyvan Zarifi (Huawei Technologies, Canada); Hadi Baligh (Huawei Technologies Canada co. Ltd., Canada); Jianglei Ma (Huawei, Canada); Mohamed Rashad Salem (Huawei Technologies Co. LTD., Canada); Amine Maaref (Huawei Technologies Canada, Canada)
pp. 1381-1385

A Decentralized Inter-Cell Interference Coordination Scheme using Multi-Objective Optimization
Haitham S. Hamza (Cairo University, Egypt); Mohamed M. Kassem (The University of Edinburgh, United Kingdom); Amany Magdy and Khaled Elsayed (Cairo University, Egypt)
pp. 1386-1390

A resource allocation mechanism for enhancing spectral efficiency and throughput of multi-link D2D communications
Hamidreza Bagheri and Marcos D Katz (University of Oulu, Finland)
pp. 1391-1396

SAB02: Localization

Semi-Supervised Logo-based Indoor Localization Using Smartphone Cameras
Hamed Sadeghi and Shahrokh Valaee (University of Toronto, Canada); Shahram Shirani (McMaster University, Canada)
pp. 2024-2028

Robust TOA based Localization for Wireless Sensor Networks with Anchor Position Uncertainties
Zemene Walle Mekonnen and Armin Wittneben (ETH Zurich, Switzerland)
pp. 2029-2033

Localization Calibration Using Illuminance Sensor for Pedestrian Dead Reckoning with Smartphones
Yohei Murakami and Tomoaki Ohtsuki (Keio University, Japan)
pp. 2034-2039

Geometry-Improved Location Estimation Algorithm for LTE-A Wireless Networks
Chien-Hua Chen (National Chiao Tnug University, Taiwan); Kai-Ten Feng (National Chiao Tung University, Taiwan)
pp. 2040-2044

Height Dependent TOA Ranging Error Model for Near Ground Localization Applications
Jie He (University of Science and Technology Beijing, P.R. China); Yishuang Geng (Worcester Polytechnic Institute, MA, USA); Cheng Xu (University of Science & Technology Beijing, P.R. China); Zhishuai Han and Duan Shihong (University of Science and Technology Beijing, P.R. China)
pp. 2045-2050

MAC03: Scheduling

Coordinated Scheduling and Beamforming Scheme for LTE-A HetNet Exploiting Direction of Arrival
Giulio Bartoli, Romano Fantacci, Dania Marabissi and Marco Pucci (University of Florence, Italy)
pp. 991-995

Transmission scheduling and congestion control for multi-hop D2D underlaying cellular networks
Junchao Li and Weiwei Xia (National Mobile Communications Research Laboratory, Southeast University, P.R. China); Song Xing (California State University, Los Angeles, USA); Lianfeng Shen (National Mobile Communications Research Laboratory, Southeast University, P.R. China)
pp. 996-1000

Channel- and Buffer-Aware Scheduling and Resource Allocation Algorithm for LTE-A Uplink
Obada Al Khatib, Wibowo Hardjawana and Branka Vucetic (The University of Sydney, Australia)
pp. 1001-1006

MAC-LTE Scheduler Modeling and Performance Evaluation in LTE Network
Naila Bouchemal (UVSQ, France); Nora Izri (University of Versailles St Quentin, France); Samir Tohme (University of Versailles, France)
pp. 1007-1012

Robust Proportional Fair Scheduling with Imperfect CSI and Fixed Outage Probability
Richard Fritzsche (Technische Universität Dresden, Germany); Peter Rost (Nokia Networks, Germany); Gerhard Fettweis (Technische Universität Dresden, Germany)
pp. 1013-1018

PHY11: Multi-Antenna Signal Processing II

An Improved Detection Algorithm Based on Lattice Reduction for MIMO System
Yunchao Song, Chen Liu and Feng Lu (Nanjing University of Posts and Telecommunications, P.R. China); Hua-An Zhao (Kumamoto Universy, Japan)
pp. 285-289

Real-time root-MUSIC DOA estimation via a parallel polynomial rooting method
Mrudula V Athi (Bose Corporation & Michigan Technological University, USA); Seyed (Reza) Zekavat (Michigan Technological University, USA)
pp. 290-295

Efficient Adaptive Vertical Downtilt Schemes in LTE-Advanced Networks
Meilong Jiang and Mohsen Hosseinian (InterDigital Communications, LLC, USA); Moon-il Lee (InterDigital Communication, USA); Janet Stern-Berkowitz (InterDigital Communications, Inc., USA)
pp. 296-301

Error Probability on the Orbital Angular Momentum Detection
Abdullah Haskou (IETR UMR CNRS 6164, Université de Rennes1, France); Philippe Mary (INSA Rennes, IETR UMR CNRS, France); Maryline Hélard (INSA Rennes & IETR Institute of Electronics and Telecommunications of Rennes, France)
pp. 302-307

MWN8: Green wireless networks

Towards Energy Efficient Relay Placement and Load Balancing in Future Wireless Networks
Hafiz Yasar Lateef (Qatar University, Qatar); Carla-Fabiana Chiasserini (Politecnico di Torino, Italy); Tamer ElBatt (Faculty of Engineering, Cairo University & WINC, Nile University, Egypt); Amr Mohamed (Qatar University & Qatar University Wireless Innovations Center, Qatar); Mohsen Guizani (QU, USA)
pp. 1397-1402

Energy-Aware Configuration of Small Cell Networks
Bahar Partov (Hamilton Institute & Alcatel-Lucent Bell Labs, Ireland); Douglas Leith (Hamilton, Ireland); Rouzbeh Razavi (Bell labs, Alcatel-Lucent, Ireland)
pp. 1403-1408

Energy-Capacity Trade-off Bounds in a downlink typical cell
Jean-Marie Gorce (INSA-Lyon, France); Dimitrios Tsilimantos (France Research Center, Huawei Technologies Co. Ltd., France); Paul Ferrand (Huawei, France); H. Vincent Poor (Princeton University, USA)
pp. 1409-1414

Joint Relay Assignment and Adaptive Modulation for Energy-Efficient Cellular Networks
Islam Samy and Ahmed H. Zahran (Nile University, Egypt); Tamer ElBatt (Faculty of Engineering, Cairo University & WINC, Nile University, Egypt)
pp. 1415-1420

Energy-Efficient Sleep Strategy for Distributed MIMO Systems
Dongyan Huang, Bo Wang and Guixia Kang (Beijing University of Posts and Telecommunications, P.R. China); Hui Tian (Beijng university of posts and telecommunications, P.R. China); Congcong Li (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1421-1425

Exploiting User Delay-Tolerance to Save Energy in Cellular Network: an Analytical Approach
Samantha Gamboa, Alexander Pelov and Patrick Maillé (Institut Mines-Telecom / Telecom Bretagne, France); Nicolas Montavont (Institut Mines Telecom / Telecom Bretagne, France)
pp. 1426-1431

MWN9: Vehicular networks

A bandwidth allocation strategy for train-to-ground communication networks
Yin Tian and Honghui Dong (Beijing Jiaotong University, P.R. China); Limin Jia (State Key Laboratory of Rail Traffic Control and Safety, P.R. China); Siyu Li (Peking University, P.R. China)
pp. 1432-1436

Connectivity at Crossroads
Marcelo G Almiron and Olga Goussevskaia (UFMG, Brazil); Alejandro C Frery (Universidade Federal de Alagoas, Brazil); Antonio A.F. Loureiro (Federal University of Minas Gerais, Brazil)
pp. 1437-1441

Fairness Kills Safety: A Comparative Study for Intersection Assistance Applications
Stefan Joerer (University of Innsbruck & University of Sydney, Austria); Bastian Bloessl (University of Paderborn, Germany); Michele Segata (University of Trento & University of Innsbruck, Italy);

Christoph Sommer (University of Paderborn, Germany); Renato Lo Cigno (University of Trento, Italy); Falko Dressler (University of Paderborn, Germany)
pp. 1442-1447

Cooperative Node Positioning In Vehicular Networks Using Inter-Node Distance Measurements
Peyman Hadi Mohammadabadi and Shahrokh Valaee (University of Toronto, Canada)
pp. 1448-1452

Utility-Based Forwarder Selection for Content Dissemination in Vehicular Networks
Farouk Mezghani and Riadh Dhaou (Université de Toulouse, INP/ENSEEIHT, IRIT, France); Michele Nogueira (Federal University of Paraná, Brazil); André-Luc Beylot (University of Toulouse, France)
pp. 1453-1458

P3: Plenary 3

P4: Plenary 4

PHY16: Antennas and Propagation

Virtual Satellite Communication Links of Incompatible Polarization via Wavefront Multiplexing Techniques
Donald Chang (Spatial Digital Systems, USA); Joe Lee (SDS, Inc., USA); Tzer-Hso Lin (SDS, USA)
pp. 308-312

A Novel Beamforming Scheme in FD-MIMO Systems with Spatial Correlation
Bin Shao (Beijing University of Posts and Telecommunications, P.R. China); Zhang Yuyan (Beijing university of P&T, P.R. China); Minyao Xing and Long Zhao (Beijing University of Posts and Telecommunications, P.R. China); Kan Zheng (Beijing University of Posts&Telecommunications, P.R. China)
pp. 313-317

Performance Variation in Electrical Balance Duplexers due to User-Interaction
Leo Laughlin, Mark Beach and Kevin A Morris (University of Bristol, United Kingdom); John Haine (U-blox, United Kingdom)
pp. 318-322

Efficient Printed Antenna for Body Wearable UWB Applications
Rod Waterhouse (Pharad LLC, USA); Dalma Novak (Pharad, USA)
pp. 323-326

2 by 2 MIMO System Using Single Leaky Coaxial Cable for Linear-cells
Yafei Hou (Nara Institute of Science and Technology, Japan); Satoshi Tsukamoto (ATR, Japan); Masayuki Ariyoshi (Advanced Telecommunications Research Institute International (ATR) & NEC Corporation, Japan); Kiyoshi Kobayashi (NTT Access Network Service Systems Laboratories, Japan); Minoru Okada (Nara Institute of Science and Technology, Japan)
pp. 327-331

PHY13: Advanced Modulation Schemes

Non-orthogonal Waveform Transmission Technique with Convolutional Multiplexing Signalling
Ying Wang (Institute of Information Engineering Chinese Academy of Sciences, P.R. China); Yongming Wang and Weihua Zhou (Institute of Information Engineering, Chinese Academy of Sciences, P.R. China); Xuanxuan Wang (Institute of Information Engineering Chinese Academy of Sciences, P.R. China); Daoben Li (Beijing University of posts and telecommunications, P.R. China)
pp. 332-337

A New 64-QAM Class with Low OFDM PMEPR Bound
Xian Liu (University of Arkansas at Little Rock, USA)
pp. 338-342

An Effective SINR Mapping Models for 256QAM in LTE-Advanced System
Juwo Yang (Beijing University of Posts and Telecommunications (BUPT), P.R. China); Hui Zhao, Wenbo Wang and Chengcheng Zhang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 343-347

Ultrafast Pulsed THz Communication
Farnoosh Moshir and Suresh Singh (Portland State University, USA)
pp. 348-353

Adaptive Spatial Modulation for Spectrally-Efficient MIMO Spectrum Sharing Systems
Zied Bouida and Ali Ghrayeb (Texas A&M University at Qatar, Qatar); Khalid A. Qaraqe (Texas A&M University at Qatar, USA)
pp. 354-358

PHY14: Cooperative Communications I

Soft Forwarding Device Cooperation Strategies for 5G Radio Access Networks
Yu Cao (Huawei Technologies Canada Co. Ltd., Canada); Amine Maaref (Huawei Technologies Canada, Canada)
pp. 359-364

Auction Framework for Resource Allocation in AF-OFDMA Systems
Hanan Al-Tous and Imad Barhumi (United Arab Emirates University, UAE)
pp. 365-369

On MMSE and VBI Detection for TWRNs Over Unknown Non-Reciprocal Time-Frequency Dispersive Channels
Ke Zhong and Shaoqian Li (University of Electronic Science and Technology of China, P.R. China)
pp. 370-375

Bipartite Network Based Multi-Cell Clustering Scheme in Randomly Located CoMP Systems
Bo Li, Tiankui Zhang and Zhimin Zeng (Beijing University of Posts and Telecommunications, P.R. China)
pp. 376-380

Performance Analysis of Cooperative Networks in Shadowed Fading with Co-Channel Interference
Petros S. Bithas (Institute for Astronomy, Astrophysics, Space Applications and Remote Sensing, Greece); Athanasios A. Rontogiannis (National Observatory of Athens, Greece)
pp. 381-385

MWN13: Mobile computing

Architecture for Multi-users Multiplexing Radio Voice Transmission for Enhancing Voice Capacity over LTE in PMR Context
Manh-Cuong Nguyen (Telecom Sud Paris, France); Hang Nguyen (Institut Telecom, Telecom SudParis, France); Alina A. Florea (Pierre and Marie Curie University, France); Eric Georgeaux (CASSIDIAN (an EADS Company), France); Laurent Martinod (Cassidian Systems & Security & Communication Solutions, France); Philippe Mege (Cassidian (EADS), France)
pp. 1459-1463

Service Discovery in Mobile Social Networks
Michele Girolami (University of Pisa & ISTI-CNR, Italy); Stefano Chessa (Universita' di Pisa, Italy); Stefano Basagni (Northeastern University, USA); Francesco Furfari (CNR-ISTI, Italy)
pp. 1464-1468

Seamless and transparent migration for TCP sessions
Raffaele Bolla, Marco Chiappero and Riccardo Rapuzzi (University of Genoa, Italy); Matteo Repetto (CNIT, Italy)
pp. 1469-1473

Small Cell Clustering for Efficient Distributed Cloud Computing
Jessica Oueis (CEA-LETI & University of Grenoble, France); Emilio Calvanese Strinati (CEA-LETI, France); Sergio Barbarossa (Sapienza University of Rome, Italy)
pp. 1474-1479

Path Selection Using Handover in Mobile Networks with Cloud-enabled Small Cells
Zdenek Becvar, Jan Plachy and Pavel Mach (Czech Technical University in Prague, Czech Republic)
pp. 1480-1485

MWN14: Cognitive radio networks 2

MIMO-based Achievable Rate on Cognitive Radio Network with Multiple Primary Users
Jing Zhai (Beijing University of Posts and Communications, P.R. China); Wenbo Xu, Kai Niu and Jiaru Lin (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1486-1490

Transmission Energy Consumption Analysis of a Multi-Channel Cognitive Radio Network Applying Stochastic Network Calculus
Yi Zhang, Yuehong Gao, Bimeng Gong, Xin Zhang and Dacheng Yang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1491-1495

Percolation Condition for Interference-limited Cognitive Radio Networks
Osama A.H. Al-Tameemi, Ayad Al-Rumaithi and Mainak Chatterjee (University of Central Florida, USA)
pp. 1496-1501

Trust based channel preference in cognitive radio networks under collaborative selfish attacks
Shameek Bhattacharjee and Mainak Chatterjee (University of Central Florida, USA)
pp. 1502-1507

Adaptive Cooperative Transmission and Spectrum Sharing in MIMO-CCRN
Zhao Li, Xinyi Kong and Jiandong Li (Xidian University, P.R. China)
pp. 1508-1513

MAC04: Cognitive Radio MAC - 2

Adaptive Packet Aggregation Scheduling Scheme for CRMANET
Yan Sun (Queen Mary University of London, United Kingdom); Dan Liu (Queen Mary University of London, P.R. China); Yuhui Yao and Chris Phillips (Queen Mary University of London, United Kingdom)
pp. 1019-1023

Throughput Maximization via Adjusting Packet Size of a Buffered Cognitive Radio User
Ahmed El Shafie (University of Texas at Dallas, USA); Tamer Khattab (Qatar University, Qatar)
pp. 1024-1029

Probabilistic Band-Splitting for a Buffered Cooperative Cognitive Terminal
Ahmed El Shafie (University of Texas at Dallas, USA); Ahmed Sultan (Alexandria University, Egypt); Tamer Khattab (Qatar University, Qatar)
pp. 1030-1035

Distributed Channel Selection in Multilink MISO Networks: Stochastic Learning under Time-Varying Channel States
Li-Chuan Tseng (MediaTek Inc., Taiwan); Feng-Tsun Chien (National Chiao Tung University, Taiwan); Ronald Y. Chang (Academia Sinica, Taiwan)
pp. 1036-1040

Network Controlled Frequency Channel and Bandwidth Allocation Scheme for IEEE 802.11a/n/ac Wireless LANs: RATOP
B. A. Hirantha Sithira Abeysekera and Munehiro Matsui (NTT Corporation, Japan); Yusuke Asai and Masato Mizoguchi (NTT, Japan)
pp. 1041-1045

PHY15: Single- and Multi-User MIMO

Performance of Turbo Codes in Overloaded MIMO-OFDM Systems using Joint Decoding
Ilmiawan Shubhi (Kyoto University, Japan); Yukitoshi Sanada (Keio University, Japan)
pp. 386-390

QoS Guaranteed Schedule for Large-Scale MIMO Systems with Pilot Reuse
Xin Xiong (Southeast University, P.R. China); Bin Jiang (Southeast University & National Mobile Communications Research Lab., P.R. China); Xiqi Gao (Southeast University, P.R. China); Xiaohu You (National Mobile communication Research Lab., Southeast University, P.R. China)
pp. 391-396

A Peak Power Aware Linear-Precoding Scheme for MIMO-SDM Systems
Satoshi Takabatake, Osamu Muta and Hiroshi Furukawa (Kyushu University, Japan)
pp. 397-401

Distributed Antenna Selection Algorithms for Improving BER in MIMO Interference Channels
Ahmed Ali (University of Texas at Dallas, USA); Cenk M. Yetis (Mevlana University, Turkey); Murat Torlak (The University of Texas at Dallas, USA)
pp. 402-406

MU-MIMO Downlink Scheduling Based On Users' Correlation and Fairness
Zhao Li and Peifeng Li (Xidian University, P.R. China); Kang G. Shin (University of Michigan, USA)
pp. 407-412

MWN11: Hetnets 1

Traffic Load Balancing Based on User Data Rate Estimation in Heterogeneous Cellular Networks
Fei Liu (RWTH Aachen University & Institute for Networked Systems, Germany); Marina Petrova (RWTH Aachen University, Germany)
pp. 1514-1519

Network-Assisted Multihoming for Emerging Heterogeneous Wireless Access Scenarios
Shreyasee Mukherjee, Akash Baid and Ivan Seskar (WINLAB, Rutgers University, USA); Dipankar Raychaudhuri (Rutgers University, USA)
pp. 1520-1524

On the Optimal Assisted Rate Allocation in N-Tier Multi-RAT Heterogeneous Networks
Dmitri Moltchanov, Mikhail Gerasimenko, Qiao Wang, Sergey Andreev and Yevgeni Koucheryavy (Tampere University of Technology, Finland)
pp. 1525-1530

Performance Evaluation of an Energy Efficient RRM strategy in Heterogeneous Cellular Networks
Pierpaolo Piunti (University of Florence - CNIT, Italy); Marco Dolfi (University of Florence & CNIT, Italy); Simone Morosi (University of Florence - CNIT, Italy); Sara Jayousi (CNIT University of Florence, Italy); Enrico Del Re (University of Florence & CNIT, Italy)
pp. 1531-1535

Parameter Optimization Using Local Search for CRE and eICIC in Heterogeneous Network
Kurumi Yamamoto and Tomoaki Ohtsuki (Keio University, Japan)
pp. 1536-1540

MWN12: Wireless sensor networks 2

Performance Bounds of Multi-Relay Deployment of Wireless Data Networks
Bader Alkandari (Worcester Polytechnic Institute, USA); Kaveh Pahlavan (WPI, USA)
pp. 1541-1546

Reduced Complexity on Mobile Sensor Deployment and Coverage Hole Healing by Using Adaptive Threshold Distance in Hybrid Wireless Sensor Networks
Aye Mon Htun (KEIO University & SASASE Lab, Japan); Maung Sann Maw (KEIO University & Chindwin College, Myanmar); Iwao Sasase (Keio University, Japan)
pp. 1547-1552

A Clock Skew Addressing Scheme for Internet of Things
Mohamed M. Kassem (The University of Edinburgh, United Kingdom); Haitham S. Hamza and Imane A. Saroit (Cairo University, Egypt)
pp. 1553-1557

Minimal Patching Barrier Healing Strategy for Barrier Coverage in Hybrid WSNs
Huan Xie (Beijing University of Posts and Telcommunications, P.R. China); MengLong Li (Beijing University of Posts and Telecommunications, P.R. China); Weidong Wang (Beijing Unversity of Posts and Telecommunications, P.R. China); Chaowei Wang (Beijing University of Posts and Telecommunications & Schoole of Electronics Engineering, P.R. China); Xiuhua Li (China Institute of Communications, P.R. China); Yinghai Zhang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1558-1563

An efficient learning technique to predict link quality in WSN
Dana Marinca (UVSQ, France); Pascale Minet and Nesrine Ben Hassine (INRIA, France)
pp. 1564-1569

PHY20: Beamforming I

Combining eICIC with Coordinated Beamforming in Downlink Heterogeneous Networks
Danish Aziz (Alcatel-Lucent Bell Labs, Germany); Paolo Baracca (Alcatel-Lucent & Bell Labs, Germany)
pp. 413-417

The GMD-based Precoding and Antenna Selection Schemes for CoMP Joint Processing
Ching-Heng Yeh and Pei-Yun Tsai (National Central University, Taiwan)
pp. 418-422

Optimality of Beamforming in Fading MIMO with Noisy Channel Estimation
Alkan Soysal (Bahcesehir University, Turkey)
pp. 423-427

On the Joint Design of Beamforming and User Scheduling in Multi-Cell MIMO Uplink Networks
Bang Chul Jung (Gyeongsang National University, Korea); Su Min Kim (Korea Polytechnic University, Korea); Hyun Jong Yang (UNIST, Korea); Won-Yong Shin (Dankook University, Korea)
pp. 428-432

Pareto Optimization for MIMO Interference Channel
Huiqin Du (Jinan University, P.R. China); Tharmalingam Ratnarajah (The University of Edinburgh, United Kingdom); Mathini Sellathurai (Heriot-Watt University, United Kingdom)
pp. 433-437

PHY17: Channel Estimation

Joint Time-Frequency Synchronization and Channel Estimation for FBMC
Yonghong Zeng and Meng Wah Chia (Institute for Infocomm Research, Singapore)
pp. 438-442

NEXT: New Enhanced Available Bandwidth Measurement Technique, Algorithm and Evaluation
Anup Kumar Paul (KDDI R&D Laboratories Inc., Japan); Atsuo Tachibana (KDDI R&D Laboratories, Japan); Teruyuki Hasegawa (KDDI R&D Laboratories Inc., Japan)
pp. 443-447

Efficient transform-domain channel estimation technique for large-scale multiple antenna systems

Qingchuan Zhang (Alcatel-Lucent Shanghai, P.R. China); Xudong Zhu (Alcatel-Lucent Shanghai Bell, P.R. China); Yubo Yang (Alcatel Shanghai Bell, P.R. China); Peng Shang (Alcatel-Lucent Bell Labs & Alcatel-Lucent, P.R. China); Jianguo Liu (Alcatel-lucent Shanghai Bell, P.R. China)

pp. 448-452

Interference-Free Proactive Channel Gain Estimation in Cognitive Radio

Mengsheng Rui and Lin Zhang (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); Gang Wu and Shaoqian Li (University of Electronic Science and Technology of China, P.R. China)

pp. 453-458

Low Complexity Adaptive Channel Estimation and QR Decomposition for an LTE-A Downlink

Rakesh Gangarajaiah, Peter Nilsson, Ove Edfors and Liang Liu (Lund University, Sweden)

pp. 459-463

PHY18: Cooperative Communications II

A Multilevel Soft Quantize-and-Forward Scheme for Multiple Access Relay Systems

Dushantha Nalin K. Jayakody (University of Tartu, Estonia); Jun Li (University of Sydney, Australia); Bin Chen and Mark F. Flanagan (University College Dublin, Ireland)

pp. 464-468

RF Energy Powered Feedback-Aided Cooperation

Hiroki Kawabata and Koji Ishibashi (The University of Electro-Communications, Japan)

pp. 469-473

Distributed Relay Selection Protocols for Simultaneous Wireless Information and Power Transfer

Jing Yan (Xi'an Jiaotong Univerisity, P.R. China); Chao Zhang (Xi'an Jiaotong University & National Mobile Communications Research Laboratory, Southeast University, P.R. China); Zhenzhen Gao (Xi'an Jiaotong University, P.R. China)

pp. 474-479

Outage Probability of Multihop MIMO Networks with Transmit Antenna Selection (TAS) in a Poisson Field of Interferes

Amr AbdelNabi (Texas A&U University at Qatar, Qatar); Fawaz Al-Qahtani (Texas A&M University at Qatar & Eduncation City, Qatar); Mohammad Shaqfeh (Texas A&M University at Qatar, Qatar); Hussein Alnuweiri (Texas A&M University, Qatar)

pp. 480-485

MWN17: Future wireless networks 2

Two-tier Spatial Modeling of Base Stations in Cellular Networks

Yifan Zhou, Zhifeng Zhao, Qianlan Ying, Rongpeng Li and Xuan Zhou (Zhejiang University, P.R. China); Honggang Zhang (Université Européenne de Bretagne (UEB) and Supelec & Zhejiang University, France)

pp. 1570-1574

Design and Optimization Aspects of Wireless Backhaul Operated in the Millimeter Wave Spectrum

Jacek Gora and Krystian Safjan (Nokia Siemens Networks, Poland)

pp. 1575-1579

Refined Evaluation of Wireless Network Evolution Approaches

Jean-Pierre Charles (Orange Labs, France); Magnus Frodigh and Anders Furuskar (Ericsson AB, Sweden); Sebastien Jeux and Ahmed Saadani (Orange Labs, France); Mohamad Sayed Hassan (Orange Labs/Alten, France); Alan Stidwell (Orange, United Kingdom); Johan Söder and Bogdan Timus (Ericsson, Sweden)

pp. 1580-1584

Receiver Based Distributed Relay Selection Scheme for 60-GHz Networks
Waheed Ur Rehman (Beijing University of Posts and Telecommunications, P.R. China); Tabinda Salam (Beijing University of Posts and Telecommunications, Beijing, P.R. China); Xiaofeng Tao (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1585-1590

Load-Aware Modeling for Uplink Cellular Networks in a Multi-Channel Environment
Ahmad M AlAmmouri (King Abdullah University of Science and Technology, Saudi Arabia); Hesham ElSawy and Mohamed-Slim Alouini (King Abdullah University of Science and Technology (KAUST), Saudi Arabia)
pp. 1591-1596

SAB03: Communication Systems and Applications

Data Transmission using Transmitter Side Channel Estimation in Wireless Power Transfer System
Kazuki Sugeno and Yukitoshi Sanada (Keio University, Japan); Mamiko Inamori (Tokai University, Japan) N/A

Emerging Satellite Communication Links of Incompatible Polarization via Wavefront Multiplexing Techniques
Donald Chang (Spatial Digital Systems, USA); Joe Lee (SDS, Inc., USA); Tzer-Hso Lin (SDS, USA)
pp. 2051-2055

A Practical and Cost-Effective Cyclic Pulse Synchronization System using IEEE 802.11 Wireless LAN
Yuji Tohzaka, Takafumi Sakamoto and Noritaka Deguchi (Toshiba Corporation, Japan); Yusuke Doi (Corporate R&D Center, Toshiba Corporation, Japan)
pp. 2056-2060

A proposal of novel q-DWT for blind and robust image watermarking
Ta Minh Thanh and Keisuke Tanaka (Tokyo Institute of Technology, Japan)
pp. 2061-2065

Compressive Sensing based Location Estimation using Channel Impulse Response Measurements
Yu-Pei Lin (National Chiao Tung University, Taiwan); Po-Hsuan Tseng (National Taipei University of Technology, Taiwan); Kai-Ten Feng (National Chiao Tung University, Taiwan)
pp. 2066-2070

MAC05: Energy-efficient MAC and Resource Management - 2

Achievable Energy Efficiency Resource Allocation in OFDM System with Mixed Traffic
Ningyu Chen, Pengxiang Hu, Xiaofeng Tao, Qimei Cui and Yujing Shang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1046-1050

Optimised Delay-Energy Aware Duty Cycle Control for IEEE 802.15.4 with Cumulative Acknowledgement
Yun Li, Kok Keong Chai and Yue Chen (Queen Mary University of London, United Kingdom); Jonathan Loo (Middlesex University, United Kingdom)
pp. 1051-1056

Energy efficient user grouping algorithm for multi-user MIMO systems
Junhyuk Kim (KAIST, Korea); Nah-Oak Song (Korea Advanced Institute of Science and Technology (KAIST), Korea); June-Koo Kevin Rhee (KAIST, Korea)
pp. 1057-1061

Power Allocation Strategy Against Jamming Attacks in Gaussian Fading Multichannel
Fu-Te Hsu (Industrial Technology Research Institute, Taiwan); Hsuan-Jung Su (National Taiwan University, Taiwan)
pp. 1062-1066

Maximum Throughput of a Cooperative Energy Harvesting Cognitive Radio User
Ahmed El Shafie (University of Texas at Dallas, USA); Tamer Khattab (Qatar University, Qatar)
pp. 1067-1072

PHY19: Massive MIMO I

Practical Differential Quantization for Spatially and Temporally Correlated Massive MISO Channels
Yanliang Sun and Jianhua Zhang (Beijing University of Posts and Telecommunications, P.R. China); Ping Zhang (Wireless Technology Innovation Lab, Beijing University of Posts and Telecommunications, P.R. China); Linyun Wu (Beijing University of Posts and Telecommunications, P.R. China); Yuning Wang (BUPT, P.R. China)
pp. 486-491

Coordinated Pilot Reuse for Multi-Cell Massive MIMO Transmission
Tengteng Lian, Li You, Wen Zhong and Xiqi Gao (Southeast University, P.R. China)
pp. 492-496

On the effect of Antenna Correlation and Coupling on Energy-Efficiency of Massive MIMO Systems
Sudip Biswas (University of Edinburgh, United Kingdom); Christos Masouros (University College London, United Kingdom); Tharmalingam Ratnarajah (The University of Edinburgh, United Kingdom)
pp. 497-501

Product Codebook Feedback for Massive MIMO with Cross-Polarized 2D Antenna Arrays
Frederick W. Vook (Nokia Solutions and Networks, USA); Eugene Visotsky (Nokia Siemens Networks, USA); Timothy A. Thomas (Nokia, USA); Bishwarup Mondal (Nokia Siemens Networks, USA)
pp. 502-506

Parallel and Distributed Algorithm for Partial Coordination in Massive MIMO Networks
Qian Wan, Kai Niu and Jiaru Lin (Beijing University of Posts and Telecommunications, P.R. China)
pp. 507-511

MWN15: LTE/LTE-A 2

Channel-Aware Optimised Traffic Shifting in LTE-Advanced Relay Networks
Lexi Xu (China Unicom Network Technology Research Institute & Queen Mary University of London, P.R. China); Yuting Luan (Shenyang Railway Survey Design Consulting Company, P.R. China); Kun Chao, Xinzhou Cheng and Heng Zhang (China Unicom Network Technology Research Institute, P.R. China); John Schormans (Queen Mary, University of London, United Kingdom)
pp. 1597-1602

Two-Way TCP Performance Issues and Solutions in Asymmetric LTE Radio Access
Péter Szilágyi (Nokia Solutions and Networks, Hungary); Csaba Vulkán (Nokia Siemens Networks, Hungary)
pp. 1603-1608

A Dynamic LTE Uplink Packet Scheduler for Machine-to-Machine Communication
Adyson Magalhães Maia (Federal University of Ceará, Brazil); Dario Vieira (EFREI, France); Miguel Franklin de Castro (Federal University of Ceará, Brazil)
pp. 1609-1614

Handover Friendly TCP Proxy Integrated in the LTE eNodeB
Péter Szilágyi (Nokia Solutions and Networks, Hungary); Zoltán Vincze (Nokia, Hungary); Csaba Vulkán (Nokia Siemens Networks, Hungary)
pp. 1615-1620

On the Impact of LTE-U on Wi-Fi Performance
Alireza Babaei, Jennifer Andreoli-Fang and Belal Hamzeh (CableLabs, USA)
pp. 1621-1625

MWN16: Self-organizing networks

A SON Solution for Sleeping Cell Detection using Low-Dimensional Embedding of MDT Measurements
Ahmed Zoha (QMIC, Qatar); Arsalan Saeed (University of Surrey, United Kingdom); Ali Imran (University of Oklahoma, USA); Muhammad Ali Imran (University of Surrey, United Kingdom); Adnan Abu-Dayya (QMIC, Qatar)
pp. 1626-1630

Self-Organizing Aerial Mesh Networks for Emergency Communication
Marco Di Felice and Angelo Trotta (University of Bologna, Italy); Luca Bedogni (University of Bologna & Department of Computer Science, Italy); Kaushik Chowdhury (Northeastern University, USA); Luciano Bononi (University of Bologna, Italy)
pp. 1631-1636

Self-Organizing Channel Assignment for High Density 802.11 WLANs
Xiaowei Wang (McGill University, Canada); Mahsa Derakhshani (University of Toronto, Canada); Tho Le-Ngoc (McGill University, Canada)
pp. 1637-1641

Coordinating SON Instances: Reinforcement Learning with Distributed Value Function
Ovidiu Iacoboaiea (OrangeLabs and Telecom ParisTech, France); Berna Sayrac and Sana Ben Jemaa (Orange Labs, France); Pascal Bianchi (Telecom Paristech - LTCI, France)
pp. 1642-1646

Pairwise Nash and Refereeing for Resource Allocation in Self-Organizing Networks
Mathew Pradeep Goonewardena (University of Quebec & École de Technologie Supérieure, Canada); Wessam Ajib (Université du Québec à Montréal, Canada); Halima Elbiaze (University of Quebec at Montreal, Canada)
pp. 1647-1651

PHY24: Beamforming II

On OFDM-MRT with Nonlinear Power Amplifier
Ilia Iofedov (Ben Gurion University of the Negev, Israel); Dov Wulich (Ben Gurion University, Israel)
pp. 512-516

Multiuser Hybrid Phase-only Analog/Digital Beamforming with Genetic Algorithm
Cuiyun Hong, Zaixue Wei, Jian Geng and Dacheng Yang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 517-521

Distance-Aware Multi-Carrier Indoor Terahertz Communications with Antenna Array Selection
Cen Lin (Georgia Institute of Technology, USA); Geoffrey Li (Georgia Tech, USA)
pp. 522-526

Joint Beamforming for Multicell Multigroup Multicast with Per-cell Power Constraints
Guan-Wen Hsu, Hai-Han Wang, Hsuan-Jung Su and Phone Lin (National Taiwan University, Taiwan)
pp. 527-532

Worst-Case Robust MIMO Relay Precoding in Cognitive Two-Way Relay Networks
Hongjian Huang (Beijing University of Posts and Telecommunications, P.R. China); Xin Deng (Beijing University of Posts and Telecommunication, P.R. China)
pp. 533-538

PHY21: Channel Capacity

Performance Analysis of Water-Filling for Outdated CSI Multiple Hops MIMO Relay Systems
Pham Thanh Hiep and Kohno Ryuji (Yokohama National University, Japan)
pp. 539-544

On Uniform Quantization for Successive Cancellation Decoder of Polar Codes
Zhengming Shi and Kai Niu (Beijing University of Posts and Telecommunications, P.R. China)
pp. 545-549

Asymptotic Performance Analysis of Channel Inversion under CSI Imperfections
S. Morteza Razavi and Tharmalingam Ratnarajah (The University of Edinburgh, United Kingdom)
pp. 550-554

A Lower Bound on the Ergodic Capacity of Jointly Correlated Rician Fading Channels
Antonio Alisson Pessoa Guimarães (Federal University of Ceará (UFC) & Wireless Telecommunication Research Group (GTEL), Brazil); Marios Kountouris (Huawei Technologies, France); Charles Casimiro Cavalcante (Wireless Telecom Research Group - Federal University of Ceará, Brazil)
pp. 555-559

Power Control for Limited Feedback Precoding: Achievable SINRs and Optimal Capacity Analysis
Linyun Wu, Jianhua Zhang and Yanliang Sun (Beijing University of Posts and Telecommunications, P.R. China)
pp. 560-564

PHY22: Cooperative Communications III

Two-way Relay Underwater Acoustic Communication Channels with Distributed Space-Time Block Coding
Saed Daoud (Concordia University, Canada); Ali Ghrayeb (Texas A&M University at Qatar, Qatar); Bahattin Karakaya (Istanbul University, Turkey)
pp. 565-569

Clustering-based Time-Domain Inter-Cell Interference Coordination in Dense Small Cell Networks
Yaguang Wu and Hailun Xia (Beijing University of Posts and Telecommunications, P.R. China); Yao Lu (China Unicom, P.R. China); Chunyan Feng, Tiankui Zhang, Rui Han and Hao Zhou (Beijing University of Posts and Telecommunications, P.R. China)
pp. 570-574

Dynamic Load Balancing with Handover in Hybrid LiFi and WiFi Networks
Yunlu Wang (The University of Edinburgh, United Kingdom); Stefan Videv (University of Edinburgh, United Kingdom); Harald Haas (The University of Edinburgh, United Kingdom)
pp. 575-579

Matching Coalitions for Interference Classification in Large Heterogeneous Networks
Matthieu De Mari (Supelec, France); Emilio Calvanese Strinati (CEA-LETI, France); Mérouane Debbah (Supelec, France)
pp. 580-584

MWN20: Multi-hop networks

Performance Study for Off-Grid Self-Backhauled Small Cells in Dense Informal Settlements
Parth Amin (Ericsson Research, Finland); Nadew Kibret, Edward Mutafungwa, Beneyam Haile, Jyri Hämäläinen and Jukka K. Nurminen (Aalto University, Finland)
pp. 1652-1657

Interference Suppression Schemes by Linear Combining for Wireless Multiuser Relay Communications
Ahmet Ihsan Canbolat, Mamadu Bah, Kazuhiko Fukawa and Hiroshi Suzuki (Tokyo Institute of Technology, Japan)
pp. 1658-1662

Reliability Modeling and Prediction of Wireless Multi-Hop Networks with Correlated Shadowing
Shani Lu and John May (University of Bristol, United Kingdom); Russell John Haines (Toshiba Research Europe Ltd, United Kingdom)
pp. 1663-1668

Outage Probability Analysis of Amplify-and-Forward Two-Hop Multiple-Access Channel with Interference-Limited Destination
Yuping Su and Ying Li (Xidian University, P.R. China)
pp. 1669-1673

Power Control in Multihop Cellular Networks with Multiple Radio Access Technologies
Sobia Jangsher (University of Hong Kong, Hong Kong); Victor O. K. Li (University of Hong Kong, P.R. China)
pp. 1674-1678

SAB04: Networking Applications

Multi-Connectivity Strategy for Agile Service Delivery with Low Power Discovery
Taeyoung Lee (Samsung Electronics. Co., Ltd, Korea); Kwanghun Han, Myounghwan Lee, Seonghee Park and Chil-Youl Hacky Yang (Samsung Electronics, Korea)
pp. 2071-2075

An Efficient Replica Placement Heuristic for Community WMNs
Zakwan Al-Arnaout (American University of the Middle East & Victoria University of Wellington, Kuwait); Qiang Fu and Marcus Frean (Victoria University of Wellington, New Zealand)
pp. 2076-2081

A Framework for P2P Networking of Smart Devices Using Wi-Fi Direct
Ahmed Amer Shahin (University of Maryland Baltimore County & Zagazig University, USA); Mohamed Younis (University of Maryland Baltimore County, USA)
pp. 2082-2087

Efficient semantic-based IoT service discovery mechanism for dynamic environments
Sameh Ben Fredj (Telecom ParisTech/Alcatel-Lucent Bell Labs, France); Mathieu Boussard (Alcatel-Lucent Bell Labs France, France); Daniel Kofman (Telecom ParisTech & RAD Data Communications, France); Ludovic Noirie (Alcatel-Lucent Bell Labs France, France)
pp. 2088-2092

Service-oriented cross-layer management for software-defined cellular networks
Xuan Zhou, Zhifeng Zhao, Rongpeng Li and Yifan Zhou (Zhejiang University, P.R. China); Honggang Zhang (Université Européenne de Bretagne (UEB) and Supelec & Zhejiang University, France)
pp. 2093-2098

MAC06: Cross-layer Design

Sum-Rate Maximization in OFDMA Downlink Systems: A Joint Subchannels, Power, and MCS Allocation Approach
Sen Bian (China Mobile Research Institute, P.R. China); Jiongjiong Song and Min Sheng (Xidian University, P.R. China); Zecai Shao and Jinwei He (China Mobile Research Institute, P.R. China); Yan Zhang and Yuzhou Li (Xidian University, P.R. China); Chih-Lin I (China Mobile Research Institute, P.R. China)
pp. 1073-1077

Novel eICIC scheme for HetNets exploiting jointly the Frequency, Power and Time dimensions
Katerina Koutlia and Jordi Pérez-Romero (Universitat Politècnica de Catalunya (UPC), Spain); Ramon Agustí (Universitat Politècnica de Catalunya, Spain)
pp. 1078-1082

Joint User Scheduling and Interference Alignment Beamforming in Heterogeneous Wireless Networks
Yu-Fan Chen and Li-Chun Wang (National Chiao Tung University, Taiwan); Wern-Ho Sheen (National Chung Cheng University, Taiwan)
pp. 1083-1087

Network Lifetime Maximization Based Joint Resource Optimization for Wireless Body Area Networks

Rong Chai, Panpan Wang and Zheng Huang (Chongqing University of Posts and Telecommunications, P.R. China); Cui Su (Chongqing University of posts and Telecommunications, P.R. China)

pp. 1088-1092

Joint Scheduling of Communication and Computation Resources in Multiuser Wireless Application Offloading

Marc Molina (Universitat Politècnica de Catalunya, Spain); Olga Muñoz-Medina (Technical University of Catalonia, Spain); Antonio Pascual-Iserte and Josep Vidal (Universitat Politècnica de Catalunya, Spain)

pp. 1093-1098

PHY23: Massive MIMO II

Detection of Active Eavesdroppers in Massive MIMO

Dzevdan Kapetanovic (Ericcson, Sweden); Azzam Al-Nahari (Ibb, Sweden); Aleksandar Stojanovic (University of Luxembourg, Luxemburg); Fredrik Rusek (Lund University, Sweden)

pp. 585-589

Massive MIMO Cooperative Communications for Wireless Sensor Networks: Throughput and Energy Efficiency Analysis

Nadjib Achir (Universite Paris 13, Sorbonne Paris Cite, France); Mérouane Debbah (Supelec, France); Paul Muhlethaler (INRIA, France)

pp. 590-594

Multi-Way Amplify-and-Forward Relay Networks With Massive MIMO

Gayan Amarasuriya and H. Vincent Poor (Princeton University, USA)

pp. 595-600

Uplink Performance of Conventional and Massive MIMO Cellular Systems with Delayed CSIT

Anastasios Papazafeiropoulos (Imperial College London, United Kingdom); Hien Quoc Ngo (Linkoping University, Sweden); Michail Matthaiou (Queen's University Belfast, United Kingdom); Tharmalingam Ratnarajah (The University of Edinburgh, United Kingdom)

pp. 601-606

Joint Fixed Beamforming and Eigenmode Precoding for Super High Bit Rate Massive MIMO Systems Using Higher Frequency Bands

Tatsunori Obara, Satoshi Suyama, Jiyun Shen and Yukihiko Okumura (NTT DOCOMO, INC., Japan)

pp. 607-611

MWN18: Small cells

A Flexible Backhaul Architecture for Small Cell Networks

Yi Shi (Huawei Technologies, P.R. China); Xin Xiong (Huawei Technologies Co., Ltd., P.R. China); Mingchao Li and Guanglin Han (Huawei Technologies, P.R. China); Xiaodai Dong (University of Victoria, Canada)

pp. 1679-1684

How to Upgrade Wireless Networks: Small Cells or Massive MIMO?

Xiangxiang Xu and Xiujun Zhang (Tsinghua University, P.R. China); Walid Saad (Virginia Tech, USA); Yifei Zhao (Tsinghua University, P.R. China); Shidong Zhou (Tsinghua University, Canada)

pp. 1685-1689

How D2D Communication Influences Energy Efficiency of Small Cell Network with Sleep Scheme

Chengcheng Yang (Beijing University of Posts and Telecommunications, P.R. China); Jiang Han (Stanford University, P.R. China); Xiaodong Xu (Beijing University of Posts and Telecommunications & Wireless Technology Innovation Institute, P.R. China)

pp. 1690-1695

Distributed Transmit Power Management for Small Cell Networks
Nur Ilyana Anwar Apandi (University of Sydney, Australia, Australia); Wibowo Hardjawana (The University of Sydney, Australia); Branka Vucetic (University of Sydney, Australia)
pp. 1696-1700

Resource Allocation in Cellular Networks with Moving Small Cells with Probabilistic Mobility
Sobia Jangsher (University of Hong Kong, Hong Kong); Victor O. K. Li (University of Hong Kong, P.R. China)
pp. 1701-1705

MWN19: Location dependent networks and location management

A Distributed, Energy-Efficient and QoI-Aware Framework for In-Network Processing
Sepideh Nazemi and Kin K. Leung (Imperial College, United Kingdom); Ananthram Swami (Army Research Lab., USA)
pp. 1706-1710

Distributed Uplink Interference Coordination via Pricing in HSPA+ HetNet
Rongqian Qin (Beijing University of Posts and Telecommunications, P.R. China); Chang Yongyu (Beijing University of Posts & Telecommunications, P.R. China); Daixu Zheng (Beijing University of Posts and Telecommunication, P.R. China); Chi Zhang and Dacheng Yang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1711-1716

Research of Mobile Deployment and Sub-channel Distribution under Terrain Topology Impact
Xiaoxing Yu (TELECOM ParisTech, France); Philippe Martins (Telecom Paristech, France); Thomas Courtat (Télécom ParisTech, France); Laurent Decreusefond (Telecom ParisTech & CNRS LTCI, France); Jean-Marc Kelif (Orange Labs, France)
pp. 1717-1721

Comparison of POA and TOA Based Ranging Behavior for RFID Application
Yongtao Ma (Tianjin University, P.R. China); Kaveh Pahlavan (WPI, USA); Yishuang Geng (Worcester Polytechnic Institute, MA, USA)
pp. 1722-1726

Dual Handover Triggers to Improve QoE for Indoor and Outdoor Mobility
Takamichi Inoue (NEC Corporation, Japan); Yoshinori Watanabe (NEC, Japan); Takahiro Nobukiyo and Yasuhiko Matsunaga (NEC Corporation, Japan)
pp. 1727-1731

Downlink Coverage Performance of 2-Tier Closed Access Heterogeneous Cellular Networks
Aroba Khan and Abbas Jamalipour (University of Sydney, Australia)
pp. 1732-1736

P5: Plenary 5

PHY28: Interference Mitigation I

LLR-based Interference Suppression for the Physical Downlink Control Channel of LTE-A
Alexei Davydov and Gregory Morozov (Intel Corp., Russia)
pp. 612-617

Throughput of Two-Tier Heterogeneous Wireless Networks with Interference Coordination
Yi Luo (University of Edinburgh, United Kingdom); Tharmalingam Ratnarajah (The University of Edinburgh, United Kingdom)
pp. 618-622

Digitally Assisted Adaptive Non-Linearity Suppression Scheme for RF front ends
Rakesh Gangarajaiah, Mohammed Abdulaziz, Liang Liu and Henrik Sjöland (Lund University, Sweden)
pp. 623-627

Narrowband Interference Suppression in Long Term Evolution Systems
João Paulo Miranda and Dick Melgarejo (CPqD, Brazil); Fabiano Mathilde and Ricardo Yoshimura (CPqD - Center of Research and Development in Telecommunications, Brazil); Felipe Augusto de Figueiredo (CPqD & CPqD, Brazil); Juliano Joao Bazzo (CPqD - Telecommunications Research and Development Center & UNICAMP - State University of Campinas, Brazil)
pp. 628-632

Adaptive LS-based Beamformer Design for Multiuser MIMO Interference Channels
S. Morteza Razavi and Tharmalingam Ratnarajah (The University of Edinburgh, United Kingdom)
pp. 633-637

PHY25: Cognitive and Green Radio I

Novel Spectrum Sensing Scheme in Cognitive Radio By Simultaneously Sensing/Transmitting At Full-Duplex Tx and BER Measurements At Rx
Yingqi Lu (University of Calgary, Canada); Donglin Wang (New York Institute of Technology, USA); Michel Fattouche (University of Calgary, Canada)
pp. 638-642

An Empirical Polarization Domain Channel Availability Model for Cognitive Radio
Eleftherios Chatziantoniou, Ben Allen and Vladan Velisavljević (University of Bedfordshire, United Kingdom)
pp. 643-647

Outage Performance of Dynamic Spectrum Access Systems with Energy Harvesting Transmitters
Komal Janghel and Shankar Prakriya (Indian Institute of Technology, Delhi, India)
pp. 648-652

Resource Allocation for Multicarrier Cooperative Cognitive Radio Networks with Imperfect Channel State Information
Jeroen Van Hecke (Ghent University, Belgium); Paolo Del Fiorentino, Filippo Giannetti and Vincenzo Lottici (University of Pisa, Italy); Luc Vandendorpe (University of Louvain, Belgium); Marc Moeneclaey (Ghent University, Belgium)
pp. 653-658

Estimation of Centralized Spectrum Sensing Overhead for Cognitive Radio Networks
Pengda Huang and Dinesh Rajan (Southern Methodist University, USA)
pp. 659-663

PHY26: PHY Performance Evaluation I

Performance Evaluation of Cognitive Multi-Relay Networks with Multi-Receiver Scheduling
Thi My Chinh Chu and Hans-Juergen Zepernick (Blekinge Institute of Technology, Sweden); Hoc Phan (University of Reading, United Kingdom)
pp. 664-669

Performance Evaluation of Interference Cancellation using a Generalized-Array-Manifold Model
Nan Zhang and Xuefeng Yin (Tongji University, P.R. China); Li Tian (Tongji University & University of Bologna, P.R. China); Weiming Duan (Huawei, P.R. China); Silvia Ruiz Boqué (UPC, Spain)
pp. 670-675

Efficient BER Simulation of Orthogonal Space-Time Block Codes in Nakagami-m Fading
Lennert Jacobs and Marc Moeneclaey (Ghent University, Belgium)
pp. 676-680

Modeling and Analysis of HetNet Interference using Poisson Cluster Processes
Young Jin Chun and Mazen Omar Hasna (Qatar University, Qatar); Ali Ghrayeb (Texas A&M University at Qatar, Qatar)
pp. 681-686

An Upper Bound On BER in a Coded Two-Transmission Scheme with Same-size Arbitrary 2D Constellations
Mehmet Ilter and Halim Yanikomeroglu (Carleton University, Canada)
pp. 687-691

MWN23: Coverage and network/resource management

Three-dimensional Coverage Control of Common Control Signals for Cellular Networks
Cheng Wang and Aiping Huang (Zhejiang University, P.R. China); Dongdong Fan (China Mobile Group Zhejiang CO., LTD., P.R. China); Hangguan Shan (Zhejiang University, P.R. China); Zhouyun Wu (Technology Innovation Center, China Telecom, P.R. China); Hongcheng Zhuang (Huawei Technologies Co., Ltd, P.R. China)
pp. 1737-1742

Coverage Mapping Using Spatial Interpolation With Field Measurements
Hajer Braham (Telecom Paris Tech & Orange Labs, France); Sana Ben Jemaa and Berna Sayrac (Orange Labs, France); Gersende Fort (CNRS, France); Eric Moulines (Télécom Paris Tech, France)
pp. 1743-1747

Solving MBMS RRM Problem by Metaheuristics
Qing Xu (Université de Technologie de Belfort-Montbéliard, France); Hakim Mabed (Université de Franche-Comté, France); Alexandre Caminada (UTBM, France); Lassabe Frédéric (Université de Technologie de Belfort-Montbéliard, France)
pp. 1748-1752

On the Reliability of Solar-Powered Point-to-Point Radio Backhaul Networks
Christian Mannweiler (Nokia Networks, Germany); Pratip Chakraborty and Hans D. Schotten (University of Kaiserslautern, Germany)
pp. 1753-1757

Extending satellite service availability through energy efficient cooperation
Riadh Dhaou (Université de Toulouse, INP/ENSEEIHT, IRIT, France); Benoit Escrig (Université de Toulouse & IRIT, France); Beatrice Paillassa (University of Toulouse, IRIT, France); Caroline Bes (CNES, France)
pp. 1758-1762

MWN24: Cognitive radio networks 3

Channel Dependant Dynamic Threshold Control for Energy Detection Based Spectrum Sensing
Gangming Lyu, Pei Zhang, Pinyi Ren and Guobing Li (Xi'an Jiaotong University, P.R. China)
pp. 1763-1767

A Dirty Paper Coding Scheme for Multiuser MIMO Cognitive Radio Channel
Yuting Sun, Wenbo Xu and Jiaru Lin (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1768-1772

Trellis Shaping Based Dirty Paper Coding Scheme for the Overlay Cognitive Radio Channel
Yuting Sun, Wenbo Xu and Jiaru Lin (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1773-1777

Dynamic Spectrum Access for Multi-Radio Access Technology, Multi-Operator Autonomous Small Cell Communication Systems
Ahmed Alsohaily and Elvino Silveira Sousa (University of Toronto, Canada)
pp. 1778-1782

An Efficient Bandwidth Aggregation Algorithm using Game Theory for Multimedia Transmission
Tanima Dutta (TCS Innovation Labs, India); Samar Shailendra (Tata Consultancy Services, India); Balamuralidhar P. (TCS Innovation Labs, India)
pp. 1783-1787

MAC07: Interference Management

Cross-Tier Interference-Aware Uplink Scheduling over Non-Ideal Backhaul
Haibo Wang (Beijing University of Posts and Telecommunications, P.R. China); Zhenning Shi (France Telecom R&D, P.R. China); Liang Liu (France Telecom R&D Beijing, P.R. China); Bin Shao (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1099-1103

User Partitioning Based Resource Allocation and Interference Coordination in Heterogeneous Networks
Xi Chen (Beijing University of Posts and Telecommunications, Beijing, P.R. China); Hailun Xia, Zhimin Zeng, Shie Wu and WenQi Zuo (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1104-1108

Interference Alignment based Coordinated Scheduling for Uplink Small Cell Enhancement
Yubo Yang (Alcatel Shanghai Bell, P.R. China); Qingchuan Zhang (Alcatel-Lucent Shanghai, P.R. China); Peng Shang (Alcatel-Lucent Bell Labs & Alcatel-Lucent, P.R. China); Jianguo Liu (Alcatel-lucent Shanghai Bell, P.R. China)
pp. 1109-1114

Mobility-Aware Dynamic Inter-Cell Interference Coordination in HetNets with Cell Range Expansion
Reben Kurda (University of Paris-Sud11, France); Lila Boukhatem (University Pars-Sud XI, France); Megumi Kaneko (Kyoto University, Japan); Tara Ali Yahiya (University Paris Sud 11, France)
pp. 1115-1119

Maximum Link Activation in Wireless Networks with Cooperative Transmission and Successive Interference Cancellation
Qing He and Di Yuan (Linköping University, Sweden)
pp. 1120-1124

PHY27: Signal Processing for Wireless Communications I

Impact of Wireless Channel Uncertainty Upon M-Ary Distributed Detection Systems
Zahra Hajibabaei and Azadeh Vosoughi (University of Central Florida, USA)
pp. 692-696

Timing Synchronization Performance of Preamble Signal with Orthogonal Frequency Multiplexed Data Signal in the Presence of Frequency Offset
Takaaki Kitano, Yuki Tanaka and Yukitoshi Sanada (Keio University, Japan)
pp. 697-701

Second-Order Statistics of Channel State Information in A Multi-Cell Mobile Network with Fast Fading
Xiang Xu, The Nam Pham and Rudolf Mathar (RWTH Aachen University, Germany)
pp. 702-706

The Analysis of Estimation Error of Non-causal Training Based On A Unified Error Model
Mengbing Xia, Li Chen and Weidong Wang (University of Science and Technology of China, P.R. China)
pp. 707-711

Bayesian Cram´er-Rao Bound for Distributed Vector Estimation with Linear Observation Model
Mojtaba Shirazi and Azadeh Vosoughi (University of Central Florida, USA)
pp. 712-716

MWN21: Hetnets 2

Joint Optimization of Coverage and Capacity in Heterogeneous Cellular Networks
Xiaojuan Wang, Ying-lei Teng, Mei Song, Xuechun Wang and Anqi Xing (Beijing University of Posts and Telecommunications, P.R. China)

pp. 1788-1792

A Belief Propagation Approach for Distributed User Association in Heterogeneous Networks
Youjia Chen and Jun Li (University of Sydney, Australia); He Chen (The University of Sydney, Australia); Zihuai Lin (University of Sydney, Australia); Guoqiang Mao (The University of Technology, Sydney, Australia); Jianyong Cai (Fujian Normal University, P.R. China)
pp. 1793-1797

Stochastic Geometry Analysis of Energy Efficiency in HetNets with Combined CoMP and BS Sleeping
Anqi He (Queen Mary, University of London, United Kingdom); Dantong Liu and Yue Chen (Queen Mary University of London, United Kingdom); Tiankui Zhang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1798-1802

Minimizing Power Consumption in HetNets with Packet Delay Constraints
Peng-Yong Kong (Khalifa University of Science, Technology & Research, UAE); George K. Karagiannidis (Aristotle University of Thessaloniki, Greece)
pp. 1803-1807

A Base Station On-Off Model for Coverage,Throughput and Economy Analysis under HetNet
Sida Song (Beijing University of Posts and Telecommunications, P.R. China); Chang Yongyu (Beijing University of Posts & Telecommunications, P.R. China); Xianling Wang (Xiamen University of Technology, P.R. China); Hao Xu, Tengxiao Sun and Dacheng Yang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1808-1813

MWN22: Wireless sensor networks 3

Modeling the Lifetime of Wireless Multimedia Sensor Networks with a Mobile Sink
Binbin Lv, Juan Xu and Xiaojun Zheng (Tongji University, P.R. China)
pp. 1814-1818

On the Spectrum Efficiency of Mesh and Star Topology Wide Area Wireless Sensor Networks
Tuncer Baykas (Istanbul Medipol University, Turkey); Leonardo Goratti (Create-net, Italy); Tinku Rasheed (Create-Net Research, Italy); Shuzo Kato (Tohoku University, Japan)
pp. 1819-1823

3D Localization in Large-Scale Wireless Sensor Networks: A Micro-Differential Evolution Approach
Hojjat Salehinejad and Robert Zadeh (UOIT, Canada); Ramiro Liscano (University of Ontario Institute of Technology, Canada); Shahryar Rahnamayan (University of Ontario Institute of Technology (UOIT), Canada)
pp. 1824-1828

Regional Energy Aware Clustering with Isolated Nodes in Wireless Sensor Networks
Tung-Hung Chiang and Jenq-Shiou Leu (National Taiwan University of Science and Technology, Taiwan)
pp. 1829-1833

Implementation of Multi-Path Energy Routing
Deepak Mishra (Indian Institute of Technology Delhi, India); K Kaushik (IIT Delhi, India); Swades De (Indian Institute of Technology Delhi, India); Stefano Basagni and Kaushik Chowdhury (Northeastern University, USA); Soumya Jana (Indian Institute of Technology, Hyderabad, India); Wendi Heinzelman (University of Rochester, USA)
pp. 1834-1839

PHY32: Interference Mitigation II

IoT Control based on Uplink Inter-Cell Power Control in LTE System
Jianguo Liu (Alcatel-lucent Shanghai Bell, P.R. China); Jun Wang (Alcatel-Lucent Shanghai Bell & ALU, P.R. China); Gang Shen (Alcatel Shanghai Bell Co., Ltd., P.R. China); Yubo Yang (Alcatel Shanghai Bell, P.R. China)
pp. 717-721

Material Transmission Loss Modeling for Indoor Propagation Modeling
Minoru Inomata (NTT Corporation, Japan); Tomoaki Ogawa (NTT, Japan); Shuichi Yoshino (NTT Corporation, Japan)
pp. 722-726

Analysis of In-band Interference in Noise-based Frequency Offset Modulation
Ibrahim Bilal, Arjan Meijerink and Mark J. Bentum (University of Twente, The Netherlands)
pp. 727-732

Joint Interference Alignment and Power Allocation in Heterogeneous Networks
Qin Niu, Zhimin Zeng and Tiankui Zhang (Beijing University of Posts and Telecommunications, P.R. China); Qiubin Gao (Tsinghua University, P.R. China); Shaohui Sun (China Academy of Telecommunications Technology (CATT), P.R. China)
pp. 733-737

PHY29: Cognitive and Green Radio II

Performance Analysis of Cooperative Spectrum Sensing for Cognitive Wireless Radio Networks over Nakagami-m Fading Channels
Quoc-Tuan Vien, Huan X Nguyen and Ramona Trestian (Middlesex University, United Kingdom); Purav Shah (Middlesex University & School of Science and Technology, United Kingdom); Orhan Gemikonakli (Middlesex University, United Kingdom)
pp. 738-742

Extended 4-Point Approximation of the Optimal QAM Modulation Detector
Yun Chen, Christopher Husmann and Ahmad Saad (Fraunhofer Institute for Embedded Systems and Communication Technologies ESK, Germany); Mike Heidrich (Fraunhofer Institute for Communication Systems (ESK), Germany)
pp. 743-747

Simultaneous Wireless Information and Power Transfer for Cognitive Two-Way Relaying Networks
Xiaomei Lu, Wenjun Xu, Shengyu Li, Zhihui Liu and Jiaru Lin (Beijing University of Posts and Telecommunications, P.R. China)
pp. 748-752

On the Use of Eigenvectors for Signal Detection and Classification in Multiple Antenna Cognitive Radios
Farrukh Aziz Bhatti (Institute of Space Technology, Islamabad, Pakistan); Claudio da Silva (Samsung, USA); Gerard B. Rowe (University of Auckland, New Zealand); Kevin W Sowerby (The University of Auckland, New Zealand)
pp. 753-757

Secondary Transmit Beamformings for Spectrum Leasing in CRNs in the Presence of Eavesdropper
Masahiro Endo and Tomoaki Ohtsuki (Keio University, Japan); Takeo Fujii (The University of Electro-Communications, Japan); Osamu Takyu (Shinshu University, Japan)
pp. 758-762

PHY30: PHY Performance Evaluation II

A Reliable Connectivity Based Node Placement Strategy in Linear and Hierarchical Wireless Sensor Networks
Salman Ali (National University of Sciences and Technology, Pakistan); Saad B. Qaisar (School of Electrical Engineering and Computer Science (SEECS), NUST & National University of Sciences & Technology, Pakistan); Emad Felemban (Umm Al Qura University, Saudi Arabia)
pp. 763-767

Performance Analysis of Envelope Tracking Power Amplifier's Envelope Shaping Methods for LTE Mobile Terminal Application
Yongbin Wu (Beijing University Of Posts And Telecommunications, P.R. China); Xinning Zhu (Beijing University of Posts and Telecommunications, P.R. China); Xinshulin Li (Beijing University Of Posts

And Telecommunications, P.R. China); Hailun Xia and Zhimin Zeng (Beijing University of Posts and Telecommunications, P.R. China)
pp. 768-773

Unified Performance Analysis of Hybrid-ARQ with Incremental Redundancy over Free-Space Optical Channels
Emna Zedini (KAUST, Saudi Arabia); Ali Chelli (Norwegian University of Science and Technology (NTNU), Saudi Arabia); Mohamed-Slim Alouini (King Abdullah University of Science and Technology (KAUST), Saudi Arabia)
pp. 774-778

Sub-Channel Selection for Multi-User Channel Access in Next Generation Wi-Fi
Hanqing Lou and Juan Fang (Interdigital, USA); Oghenekome (Kome) Oteri (InterDigital Communications, USA); Monisha Ghosh (InterDigital, USA); Pengfei Xia (Tongji University, USA); Robert L. Olesen (Interdigital Communications Corp., USA)
pp. 779-784

Performance of Amplitude Modulation Schemes for Molecular Communication Over a Fluid Medium
Amit Singhal (IIT Delhi, India); R. K. Mallik (Indian Institute of Technology - Delhi, India); Brejesh Lall (Indian Institute of Technology Delhi, India)
pp. 785-789

MWN27: Future wireless networks 3

On the Performance Gain of Flexible UL/DL TDD with Centralized and Decentralized Resource Allocation in Dense 5G Deployments
Venkatasubramanian Venkatkumar (Nokia Networks - Research, Poland); Matthias Hesse (Nokia Solutions and Networks, Poland); Patrick Marsch (Nokia Networks, Poland); Michał Maternia (Nokia Siemens Networks, Poland)
pp. 1840-1845

Data offloading for multi-hop cellular networks
Varuni Katti Sastry and Allen B. MacKenzie (Virginia Tech, USA); Luiz DaSilva (Trinity College, Ireland); Beatriz Lorenzo (University of Vigo, Spain); Savo Glisic (University of Oulu, Finland)
pp. 1846-1851

Delayed Offloading using Cloud Cooperated Millimeter Wave Gates
Ehab Mahmoud Mohamed (Osaka University, Japan); Kei Sakaguchi (Osaka University & Tokyo Institute of Technology, Japan); Seiichi Sampei (Osaka University, Japan)
pp. 1852-1856

Optimal User Association for Delay-Power Tradeoffs in HetNets with Hybrid Energy Sources
Dantong Liu and Yue Chen (Queen Mary University of London, United Kingdom); Kok Keong (Michael) Chai (Queen Mary, University of London, United Kingdom); Tiankui Zhang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1857-1861

Total Transmission Delay Minimization based Spectrum Selection Scheme for Heterogeneous Cognitive Radio Networks
Rong Chai, Zhimin Guo and Qin Hu (Chongqing University of Posts and Telecommunications, P.R. China)
pp. 1862-1866

SAB05: Signal Detection Applications

Indoor Positioning System Based on Improved PDR and Magnetic Calibration Using Smartphone
Chengkai Huang (Beijing University of Posts and Telecommunications, P.R. China); Shanbao He (China Academy of Space Technology, P.R. China); Zhuqing Jiang, Chao Li, Yupeng Wang and Xueyang Wang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 2099-2103

Detecting Unexpected Fall Using Array Antenna
Yusuke Hino, Jihoon Hong and Tomoaki Ohtsuki (Keio University, Japan)
pp. 2104-2108

A Fall Detection System Using Low Resolution Infrared Array Sensor
Shota Mashiyama, Jihoon Hong and Tomoaki Ohtsuki (Keio University, Japan)
pp. 2109-2113

Novel Design of Hand Motion Recognition based Visual Acuity Measurements through Wireless Communications
Yu-Chieh Tien and Chun-Jie Chiu (National Chiao Tung University, Taiwan); Po-Hsuan Tseng (National Taipei University of Technology, Taiwan); Kai-Ten Feng (National Chiao Tung University, Taiwan)
pp. 2114-2118

Blink Detection using Doppler Sensor
Chihiro Tamba, Tomoaki Ohtsuki and Shoichiro Tomii (Keio University, Japan)
pp. 2119-2124

MAC08: MAC Resource Allocation

Control superframe for High Throughput of Cluster-Based WBAN with CSMA/CA
Pham Thanh Hiep and Kohno Ryuji (Yokohama National University, Japan)
pp. 1125-1130

Cooperative Strategies Combination for Uplink Multi-cell Networks Under Limited Backhaul
Pengxiang Hu, Yinxiang Zhang, Ningyu Chen, Xiaofeng Tao, Qimei Cui and Yujing Shang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1131-1135

Adaptive Reliability-Based Splitting Algorithms for Ordered Sequential Detection in WSNs
Seksan Laitrakun (Mae Fah Luang University, Thailand); Edward Coyle (Georgia Institute of Technology, USA)
pp. 1136-1141

Head-of-Line Blocking Avoidance in Multimedia Streaming over Wireless Networks
Evgeny Khorov and Anton Kiryanov (IITP RAS & MIPT, Russia); Viacheslav Loginov (Institute for Information Transmission Problems, Moscow Insitute of Physics and Technology, Russia); Andrey Lyakhov (IITP RAS, Russia)
pp. 1142-1146

Application-Specific and QoS-Aware Scheduling for Wireless Systems
Chao He and Richard D. Gitlin (University of South Florida, USA)
pp. 1147-1151

PHY31: Signal Processing for Wireless Communications II

A Simplex Algorithm for LP Decoding Hardware
Florian Gensheimer (University of Kaiserslautern, Germany); Stefan Ruzika (University of Koblenz-Landau, Germany); Stefan Scholl and Norbert Wehn (University of Kaiserslautern, Germany)
pp. 790-794

An Enhanced Zero-forcing Equalizer for Combinerless LINC-OFDM Systems
Sheng-Lung Cheng, Wen-Rong Wu and Ying-Pei Hsu (National Chiao Tung University, Taiwan)
pp. 795-799

Widely Linear Receivers for SMT Systems with TX/RX Frequency-Selective I/Q Imbalance
Aamir Ishaque (RWTH, Aachen University Germany, Germany); Gerd H. Ascheid (RWTH Aachen University, Germany)
pp. 800-805

Automatic Modulation Classification using Polynomial Classifiers
Ameen Abdelmutalab, Khaled Assaleh and Mohamed El-Tarhuni (American University of Sharjah, UAE)
pp. 806-810

Digital Predistortion With Advance/Delay Neural Network and Comparison With Volterra Derived Models
Tomas Gotthans (Brno University of Technology, Czech Republic); Geneviève B. Baudoin (ESIEE, France); Amadou Tidiane Mbaye (Signal Processing and Telecommunications ESIEE-Paris, France)
pp. 811-815

MWN25: Smart grids and MIMO

Routing Resilience Evaluation for Smart Metering: Definition, Metric and Techniques
Ochirkhand Erdene-Ochir (Qatar University, Qatar); Mohamed M. Abdallah (Texas A&M University at Qatar, Qatar); Khalid A. Qaraqe (Texas A&M University at Qatar, USA); Marine Minier (Insa de Lyon, France); Fabrice Valois (INSA Lyon, France)
pp. 1867-1871

Cooperative Distributed Erasure Code Scheduling for Smart Grid Communications
Chun-Feng Wu and Wei-Ho Chung (Academia Sinica, Taiwan)
pp. 1872-1875

Traffic Modeling and Performance Evaluation of Wireless Smart Grid Access Networks
Obada Al Khatib, Wibowo Hardjawana and Branka Vucetic (The University of Sydney, Australia)
pp. 1876-1881

Optimized Detection Scheme in Uplink Network MIMO under Constraint Backhaul
Shipeng Wang, Li Chen and Ying Yang (University of Science and Technology of China, P.R. China); Guo Wei (University of Sci. & Tech. of China, P.R. China)
pp. 1882-1886

Evaluations of Downlink Non-Orthogonal Multiple Access (NOMA) Combined with SU-MIMO
Xiaohang Chen (DOCOMO Beijing Communications Laboratories Co., Ltd, P.R. China); Anass Benjebbour (NTT DOCOMO, INC., Japan); Yang Lan and Anxin Li (DOCOMO Beijing Communications Laboratories Co., Ltd, P.R. China); Huiling Jiang (DOCOMO Beijing Communications Laboratories Co., Ltd., P.R. China)
pp. 1887-1891

MWN26: Analysis and algorithms

Average Throughput Analysis of Downlink Cellular Networks with Multi-Antenna Base Stations
Rui Wang, Jun Zhang, Shenghui Song and Khaled B. Letaief (The Hong Kong University of Science and Technology, Hong Kong)
pp. 1892-1896

An Analysis on Secrecy Capacity of the Hoyt-Hoyt Fading Channel
Xian Liu (University of Arkansas at Little Rock, USA)
pp. 1897-1901

Complex Gaussian Belief Propagation Algorithms for Distributed Multicell Multiuser MIMO Detection with Imperfect Channel State Information
Ziqi Yue and Qing Guo (Harbin Institute of Technology, P.R. China); Wei Xiang (University of Southern Queenslan, Australia)
pp. 1902-1907

Complex Gaussian Belief Propagation Algorithms for Distributed Iterative Receiver
Ziqi Yue and Qing Guo (Harbin Institute of Technology, P.R. China); Wei Xiang (University of Southern Queenslan, Australia)
pp. 1908-1912

Iterative Estimation Of Undesired Signal Power For Superposed Multicarrier Transmission With Channel Estimation Error
Yohei Shibata, Naotoshi Yoda and Tomoaki Ohtsuki (Keio University, Japan); Jun Mashino (NTT, Japan); Takatoshi Sugiyama (Kogakuin University, Japan)
pp. 1913-1917

PHY36: Interference Mitigation III

Blind Interference Alignment in General Heterogeneous Networks
Vaia Kalokidou, Oliver Johnson and Robert J Piechocki (University of Bristol, United Kingdom)
pp. 816-820

Performance Assessment of Multi User Inter Cell Interference Alignment with Measured Channels
Danish Aziz and Syed Ammar Iqbal Ahmed (Alcatel-Lucent Bell Labs, Germany); Cornelis Hoek (Alcatel-Lucent Deutschland AG, Germany); Guenther Herzog (Alcatel Lucent Deutschland AG, Germany); Johannes Koppenborg (Alcatel-Lucent Deutschland AG, Germany)
pp. 821-825

Two-Stage Interference Alignment for Partially Connected Heterogeneous Networks
Min Sheng, Guoqing Liu, Xijun Wang, Yan Zhang, Wanguo Jiao and Ying Li (Xidian University, P.R. China)
pp. 826-831

DoF region and sum rate analysis for the K user MIMO IC with limited CSI feedback
Paula Aquilina and Tharmalingam Ratnarajah (The University of Edinburgh, United Kingdom); Anastasios Papazafeiropoulos (Imperial College London, United Kingdom)
pp. 832-836

PHY33: OFDM

Optimal Technique with Distortion for Cubic Metric Reduction in OFDM Systems
Xiaodong Zhu (University of Electronic Science and Technoledge of China, P.R. China); Xiantao Cheng and Chusheng Fu (University of Elctronic Sceience and Technology of China, P.R. China)
pp. 837-840

Impulsive Noise Mitigation for OFDM-based Systems Using Enhanced Blanking Nonlinearity
Farshad Sarabchi (Polytechnique de Montreal & Poly-Grames Research Center, Canada); Chahe Nerguizian (Ecole Polytechnique, Canada)
pp. 841-845

Digital Estimation and Compensation of I/Q Imbalance for Full-Duplex Dual-Band OFDM Radio
Zhaowu Zhan (INSA Lyon, France); Guillaume Villemaud (Université de Lyon, INRIA, INSA-Lyon, CITI, France); Florin Hutu (INSA Lyon & INSA, France); Jean-Marie Gorce (INSA-Lyon, France)
pp. 846-850

SEE-OFDM: Spectral and Energy Efficient OFDM for Optical IM/DD Systems
Hany Elgala and Thomas DC Little (Boston University & NSF Smart Lighting ERC, USA)
pp. 851-855

On the Benefits of Cooperation via Power Control in OFDM-Based Visible Light Communication Systems
Mohamed Kashef and Mohamed M. Abdallah (Texas A&M University at Qatar, Qatar); Khalid A. Qaraqe (Texas A&M University at Qatar, USA); Harald Haas (The University of Edinburgh, United Kingdom); Murat Uysal (Ozyegin University, Turkey)
pp. 856-860

PHY34: Resource Allocation

Reducing the Complexity of LDPC Decoding Algorithms: An Optimization-Oriented Approach
Muris Sarajlic, Liang Liu and Ove Edfors (Lund University, Sweden)
pp. 861-866

On the choice of carrier frequency and bandwidth for 5G small cell deployments
Richard J. Weiler (Fraunhofer HHI, Germany); Wilhelm Keusgen (Fraunhofer Heinrich Hertz Institute, Germany); Hung-Anh Nguyen and Michael Peter (Fraunhofer HHI, Germany)
pp. 867-871

Energy Efficient Radio Resource Management in a Coordinated Multi-Cell Distributed Antenna System
Omer Haliloglu, Cenk Toker and Gurhan Bulu (Hacettepe University, Turkey); Halim Yanikomeroglu (Carleton University, Canada)
pp. 872-876

A Stepwise Radio Resource Allocation Scheme Considering Load Balancing in OFDM-based Relay/Cellular Networks
Yujing Shang, Yinjun Liu, Qimei Cui and Baoling Liu (Beijing University of Posts and Telecommunications, P.R. China)
pp. 877-881

User Guided Energy and Capacity Optimization in UMTS Mobile Networks
Joonas Säe and Jukka Lempiäinen (Tampere University of Technology, Finland)
pp. 882-886

MWN30: Hardware and modeling

Dual Reconfigurable Antenna Using Capacitive Coupling Slot and Parasitic Square Ring
M. Aboualalaa (ERI, Egypt); Hala Elsadek (, Egypt); Esmat A. Abdallah (ERI, Egypt)
pp. 1918-1920

A Fast Convergence Two-stage AGC for a Bluetooth Low Energy Radio with 84dB Tuning Range
Yan Zhang (IMEC-NL, The Netherlands); Yao-Hong Liu and Christian Bachman (Imec-nl, The Netherlands); Guido Dolmans (Holst Centre / IMEC-NL, The Netherlands); Harmke de Groot (Holst Centre/IMEC, The Netherlands)
pp. 1921-1925

Impact of Energy-Efficient Cell-Breathing on the Electromagnetic Radiation Levels of Mobile Phone Devices
Luis Suárez and Loutfi Nuaymi (Telecom Bretagne, France); Christian Person (Lab-STICC/MOM UMR CNRS, France); Jean-Marie Bonnin (Institut Mines Telecom / Telecom Bretagne & IRISA, France)
pp. 1926-1930

TRW: An Energy Storage Capacity Model for Energy Harvesting Sensors in Wireless Sensor Networks
Junaid A Khan (University Paris Est & University of La Rochelle, France); Hassaan Khaliq Qureshi (National University of Sciences and Technology, Pakistan); Adnan Iqbal (Namal College Mianwali, Pakistan)
pp. 1931-1936

Admission Policy Based Clustering Scheme for D2D Underlay Communications
Chunyan Cao (BUPT, P.R. China); Li Wang, Mei Song and Yong Zhang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1937-1942

PHY37: Source and Channel Coding

Construction of Nonbinary LDPC Codes Using λ-FRC for Circle Elimination
Tiantian Wang, Minjian Zhao, Yabo Li and Chen Zheng (Zhejiang University, P.R. China)
pp. 887-891

Generalized Simplified Variable-Scaled Min Sum LDPC decoder for irregular LDPC Codes
Ahmed Emran (Egypt-Japan University of Science and Technology, Egypt); Maha Elsabrouty (Egypt Japan University for Science and Technology, Egypt)
pp. 892-896

Design of Distributed Jointed Source-Channel Coding Schemes in Wireless Sensor Networks for Seismic Exploration Based on QC-LDPC Codes
Dijia Xu, Bie Hongxia and Jian Zheng (Beijing University of Posts and Telecommunications, P.R. China)
pp. 897-901

Modeling BP Decoding Error Events with the LDPC Codes of the DVB-S2 Standard
Jean-Christophe Sibel (CITI & INSA de Lyon, France); Matthieu Crussière (IETR - Electronics and Telecommunications Research Institute of Rennes (IETR) & INSA - National Institute of Applied Sciences, France); Jean-François Hélard (IETR, France)
pp. 902-907

Successive Cancellation Decoders of Polar Codes Based on Stochastic Computation
Zhenglei Xu and Kai Niu (Beijing University of Posts and Telecommunications, P.R. China)
pp. 908-912

MAC09: Cellular and Femtocell MAC

Modelling of Virtual Radio Resource Management for Cellular Heterogeneous Access Networks
Sina Khatibi (Technical University of Lisbon, Portugal); Luis M. Correia (IST - University of Lisbon & INOV-INESC, Portugal)
pp. 1152-1156

An Analysis of Generalized Resource Sharing for Multiple Operators in Cellular Networks
Ilaria Malanchini (Alcatel-Lucent Bell Labs, Germany); Stefan Valentin (Huawei Technologies, France); Osman Aydin (Alcatel-Lucent Bell Labs, Germany)
pp. 1157-1162

Multi-Application Resource Allocation with Users Discrimination in Cellular Networks
Haya Shajaiah, Ahmed Abdelhadi and T. Charles Clancy (Virginia Tech, USA)
pp. 1163-1168

A Distributed Energy-Efficient Algorithm for Resource Allocation in Downlink Femtocell Networks
Ang Li (University College London, United Kingdom); Xuewen Liao, Zhenzhen Gao and Yang Yang (Xi'an Jiaotong University, P.R. China)
pp. 1169-1174

A Component Carrier Selection Scheme in Macro and CSG Femtocells Co-channel Deployment for LTE-Advanced Downlink Systems
Zhilin Li (Beijing University of Posts and Telecommunications, P.R. China); Hui Tian (Beijng university of posts and telecommunications, P.R. China); Liqi Gao and Gaofeng Nie (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1175-1179

PHY35: Signal Processing for Wireless Communications III

A Unified Framework for Nonlinear Detections of Impulse Radio UWB Systems
Aidong Yang (Dalhousie University, Canada); Zhimeng Xu (Fuzhou University, P.R. China); Hong Nie (University of Northern Iowa, USA); Zhizhang (David) Chen (Dalhousie University, Canada)
pp. 913-917

Fast convergence and reduced complexity receiver design for LDS-OFDM system
Lei Wen, Razieh Razavi, Pei Xiao and Muhammad Ali Imran (University of Surrey, United Kingdom)
pp. 918-922

A Robust Low-Complexity MIMO Detector for Rank 4 LTE/LTE-A Systems
Shashi Kant (Ericsson AB, Sweden); Fredrik Rusek (Lund University, Sweden); Basuki Endah Priyanto (Hi-Silicon, Sweden)
pp. 923-927

Extension of Deflection Coefficient for Linear Fusion of Quantized Reports in Cooperative Sensing
Younes Abdi and Tapani Ristaniemi (University of Jyväskylä, Finland)
pp. 928-932

A Novel Time Misalignment Estimation Algorithm for Envelope Tracking (ET) Power Amplifiers (PA)
Craig Rupp, Gerardo Orozco Valdes, Michael Lyons and Sean Ferguson (National Instruments, USA); Zakir I Ahmed (National Instruments, India)
pp. 933-936

MWN28: Estimation

Distributed Approach for Channel Quality Estimation Using Dedicated Nodes in Industrial WSN
Ruan Gomes (Federal Institute of Paraíba, Brazil); Gláucio Rocha (UFPB, Brazil); Abel Lima Filho and Iguatemi E. Fonseca (Federal University of Paraíba, Brazil); Marcelo S. Alencar (Federal University of Campina Grande & Institute for Advanced Studies in Communications, Brazil)
pp. 1943-1948

SNR Estimation and Decision Making using Hypothesis Testing in Energy-Efficient Adaptive Modulation
Yinyue Qiu (Institute for Telecommunications Research & University of South Australia, Australia); Ying Chen and David Haley (University of South Australia, Australia)
pp. 1949-1953

On Energy Efficient Power Allocation for Power-Constrained Systems
Lokman Sboui (King Abdullah University of Science and Technology (KAUST), Saudi Arabia); Zouheir Rezki (King Abdullah University of Science and Technologie (KAUST), Saudi Arabia); Mohamed-Slim Alouini (King Abdullah University of Science and Technology (KAUST), Saudi Arabia)
pp. 1954-1958

Tilt Angle Adaptation in LTE Networks with Advanced Interference Mitigation
Bahar Partov (Hamilton Institute & Alcatel-Lucent Bell Labs, Ireland); Douglas Leith (Hamilton, Ireland); Rouzbeh Razavi (Bell labs, Alcatel-Lucent, Ireland)
pp. 1959-1964

Coverage Probability of Small Cell Networks with Composite Shadowing and Fading
Jiajia Chen, Li-Chun Wang and Chun-Hung Liu (National Chiao Tung University, Taiwan)
pp. 1965-1969

MWN29: Cognitive and cooperation

An Efficient Carrier Scheduling Scheme in Cognitive LTE-Advanced System with Carrier Aggregation
Zhang Yajun, Yong Zhang, Ying-lei Teng and Mei Song (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1970-1974

On the Reduction of the Noise Uncertainty Effects in Energy Detection for Spectrum Sensing in Cognitive Radios
Daniela M Martínez (University of Baja California, Mexico); Ángel G Andrade (Universidad Autónoma de Baja California & Facultad de Ingeniería, Mexico)
pp. 1975-1979

Deadline-Aware Adaptive Packet Scheduling and Transmission in Cooperative Wireless Networks
Lu Zhang and Yao Yu (Northeastern University, P.R. China); Fei Huang (Northeastern University China, P.R. China); Qingyang Song and Lei Guo (Northeastern University, P.R. China); Shiqiang Wang (Imperial College London, United Kingdom)
pp. 1980-1984

Spectral Efficiency of LTE with Small Cells and Optimum Association Threshold
Yuan Chen and Bernhard H. Walke (RWTH Aachen University, Germany)
pp. 1985-1990

Green Heterogeneous Network with Load Balancing in LTE-A Systems
Qi Li, Xinyu Gu, Liyang Lu and Lin Zhang (Beijing University of Posts and Telecommunications, P.R. China); Wenyu Li (China Academy of Telecom. Research, MIIT & Beijing University of Posts and Telecommunications, P.R. China); Xiang Zhang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1991-1995