

## Table of Contents

Performance Evaluation of Multicell Coordinated Beamforming Approaches for OFDM Systems <i>Jose Assuncao, Reza Holakouei, Adao Silva, and Atilio Gameiro</i>	1
Blind Subspace Channel Estimation in MIMO-OFDM Systems with Few Received Blocks <i>Jung-Lang Yu, Po-Ting Chen, and Wan-Ru Kuo</i>	6
Blind Estimation Schemes for Frequency Offset of OFDM Systems in Non-Gaussian Noise Environments <i>Jong In Park, Changha Yu, Youngpo Lee, and Seokho Yoon</i>	13
A Periodogram-based CFO Estimation Scheme for OFDM Systems <i>Changha Yu, Jong In Park, Youngpo Lee, and Seokho Yoon</i>	17
A Novel Concept of UWB Pulse Switching in Sensor Networks <i>Qiong Huo and Subir Biswas</i>	21
Efficient Interpolation Architecture for Soft-Decision List Decoding of Reed-Solomon Codes <i>Sungman Lee and Taegeun Park</i>	25
Two-stage Wideband Class-E Power Amplifier in a 130 nm CMOS Process <i>Danish Kalim, Adel Fatemi, and Renato Negra</i>	31
A SMART RFID Transponder <i>Riad Kanan and Darko Petrovic</i>	36
Modeling and Performance Evaluation of Small Cell Wireless Networks with Base Station Channels Breakdowns <i>Nawel Gharbi</i>	42
Theoretically Feasible QoS in a MIMO Cellular Network Compared to the Practical LTE Performance <i>Mohamed Kadhem Karray and Miodrag Jovanovic</i>	49
Evaluation of Routing Protocols for Internet-Enabled Wireless Sensor Networks <i>Ion Emilian Radoi, Aditi Shenoy, and DK Arvind</i>	56
Performance Evaluation of Data Delivery Procedure in IEEE 802.15.4 Based on Discrete-Time Markov-Chain <i>Peng Hao, Weiting Liu, and Jianhua Wang</i>	62
Merging Grid into Clustering-based Routing Protocol for Wireless Sensor Networks <i>Ying-Hong Wang, Yu-Wei Lin, Yu-Yu Lin, and Hang-Ming Chang</i>	69
WSNs Coverage Hole Partial Recovery by Nodes' Constrained and Autonomous Movements Using Virtual	74

<p><math>\alpha</math>-chords  <i>Ali Rafiei, Mehran Abolhasan, Daniel Robert Franklin, and Farzad Safaei</i></p>	
<p>A Technical Comparison Between Data Rate Enhancement Options in Radio Communications Networks  <i>Cristian Androne and Tudor Palade</i></p>	81
<p>A Greedy-based Network Planning Algorithm for Heterogeneous Smart Grid Infrastructures  <i>Christian Muller and Christian Wietfeld</i></p>	88
<p>Cramer-Rao Lower Bound on RF Pattern Matching Method with Velocity in LTE System  <i>Dengkun Xiao, Jiangbo Zhu, Jie Cui, and Xinlong Luo</i></p>	94
<p>Enabling Guaranteed Beacon and Data Slots in Multi-hop Mesh Sensor Networks for Home Health Monitoring  <i>Juan Lu, Adrien Van Den Bossche, and Eric Campo</i></p>	98
<p>AEGIR – Asynchronous Radiolocation System  <i>Slawomir Ambroziak, Ryszard Katulski, Jaroslaw Sadowski, Wojciech Siwicki, and Jacek Stefanski</i></p>	103
<p>EE-AOC: Energy Efficient Always-On-Connectivity Architecture  <i>Sameh Gabriel, Christian Maciocco, Charlie Tai, and Alexander Min</i></p>	110
<p>TAO: A Time-Aware Opportunistic Routing Protocol for Service Invocation in Intermittently Connected Networks  <i>Ali Makke, Nicolas Le Sommer, and Yves Maheo</i></p>	118
<p>Compulsory Service Extensions to SIP-Initiated Communication Sessions  <i>Philipp Marcus, Thomas Mair, and Florian Dorfmeister</i></p>	124
<p>Constrained Priority Countdown Freezing - A Collision Memory Avoidance Algorithm  <i>Ivan Kedzo, Julije Ozegovic, and Vesna Pekic</i></p>	130
<p>Reduced Complexity Algorithm for Quantized Equal Gain Transmission Codebook over Closed Loop MIMO Systems  <i>Noe Yoon Park, Xun Li, and Young Ju Kim</i></p>	135
<p>Performance Improvement of Differential Codebooks with Noisy Feedback Channels  <i>Xun Li, Noe Yoon Park, and Young Ju Kim</i></p>	141
<p>High-Throughput Mail Gateways for Mobile E-mail Services based on In-Memory KVS  <i>Masafumi Kinoshita, Gen Tsuchida, and Takafumi Koike</i></p>	146
<p>Transmission of JPEG2000 Images in an Uplink Cellular Network with UPA and SCFDE: A System Description  <i>Moein Shayegannia, Sami Muhaidat, and Atousa HajshirMohammadi</i></p>	154

Design and Implementation of a Smart Home Energy Management System with Hybrid Sensor Network in Smart Grid Environments <i>Jinsung Byun, Insung Hong, and Sehyun Park</i>	159
Research on Improving Accuracy of Cardiac Disorder Data Analysis based on Random Forest Classifier <i>HyunJu Lee, DongIl Shin, DongKyo Shin, HeeWon Park, and SooHan Kim</i>	166
Scalable Democratic Routing in Wireless Mesh Networks <i>Ronit Nossenson</i>	173
Demand Aware Fair Resource Allocation in TDMA Wireless Networks <i>Xiaolong Huang and Soumya Das</i>	178
An Analysis of the Interference Problem in Wireless TDMA Networks <i>Anuschka Igel and Reinhard Gotzhein</i>	187
QoS-aware Resource Allocation for In-band Relaying in LTE-Advanced <i>Thiago Martins de Moraes, Arturo Antonio Gonzalez, Muhammad Danish Nisar, and Eiko Seidel</i>	195
A Bandwidth Reservation Method for IPTV Service <i>Yong-do Choi, Zhi-Bin Yu, Jae-hyun Jun, and Sung-ho Kim</i>	202
Novel Three Stage Scheduler for Real Time Traffic in an OFDMA System with Delay and Retransmission Constraints <i>Suman Kumar, Krishnamurthy Giridhar, and Sheetal Kalyani</i>	208
Application Aware Mechanisms in HSPA Systems <i>Peter Szilagyi and Csaba Vulkan</i>	212
An ICT-oriented Management Solution for NGNs <i>Pedro Goncalves, Ricardo Mendes, and Rui Aguiar</i>	218
Centralized Bandwidth Management in Multi-Radio Access Networks <i>Balazs Heder, Peter Szilagyi, and Csaba Vulkan</i>	224
A Fast and Efficient Key Agreement Scheme for Wireless Sensor Networks <i>Mee Loong Yang, Adnan al-Anbuky, and William Liu</i>	231
Interactive Remote Authentication Dial in User Service (RADIUS) Authentication Server Model <i>Rohan Deshmukh</i>	238
Attribute-Based Group Key Management for Wireless Sensor Network - A Cross-layer Design Approach for	242

Group Key Management  
*Jun Noda and Yuichi Kaji*

Location-Based Utilization for Unidirectional Links in MANETs 248  
*Huda Al-Aamri, Abolhasan AbolhasanSafaei, Mehran Abolhasan, and Daniel Franklin*

Different Criteria of Selection for Quantized Feedback of Minimum-Distance Based MIMO Precoder 254  
*Ancuta Moldovan, Ghadir Madi, Baptiste Vrigneau, Tudor Palade, and Rodolphe Vauzelle*

On Browsing Behavior-based Traffic Model of Mobile Internet 259  
*Hong Tang, Xiang-yue Kong, Lu Wang, and Yu Wu*

FPGA Implementation of CRC with Error Correction 266  
*Wael El-Medany*

On Throughput Characteristics of Type II Hybrid-ARQ with Decode and Forward Relay using Non-Binary Rate-Compatible Punctured LDPC Codes 272  
*Hironori Tanaka and Yasunori Iwanami*

Using Meta-Heuristic Algorithms for Minimizing the Costs of Access-Point Location 278  
*Pawel Aksiutin, Dymitr Paremski, Iwona Pozniak-Koszalka, Leszek Koszalka, and Andrzej Kasprzak*

Multi-Level Collaborative Spectrum Sensing in Nakagami Fading Channels 284  
*Omkalthoum El-Bashir Hamed and Mohammed Abdel-Hafez*

Analysis of Interfered Noise for Sound Systems over LTE Mobile Phones 290  
*Suna Choi, Sungwoong Choi, Sangbong Jeon, Yongsup Shim, and Seungkeun Park*

Spatial Reuse and Interference-Aware Slot Scheduling in a Distributed TDMA MANET System 294  
*Isabelle Labbe, Jean-Francois Roy, Francis St-Onge, and Benoit Gagnon*

Vehicular Networks Smart Connectivity 304  
*Sivaramakrishnan Sivakumar and Adnan Al-Anbuky*

Differentially Amplitude- and Phase-Encoded QAM in Amplify-and-Forward Multiple Relay System Over Nakagami-m Fading Channels 311  
*Chi-Hua Huang and Char-Dir Chung*

Full Rate Full Diversity Wireless Multicasting for Vehicle-to-Vehicle and Vehicle-to-Infrastructure Communications 317  
*Ali Eksim and Mehmet E. Celebi*

Analysis of Statistical Time-access Fairness Index of Opportunistic Feedback Fair Scheduler 323

*Fumio Ishizaki*

Probability Density Functions of Derivatives in Two Time Instants for SSC Combiner in Rician Fading Channel 329  
*Dragana Krstic, Petar Nikolic, and Goran Stamenovic*

Performance Evaluation of MIMO Schemes in 5 MHz Bandwidth LTE System 334  
*Ali Jemmali and Jean Conan*

Joint Source-Relay Precoding with MMSE-based Interference Suppression in two-way MIMO Amplify and Forward Relays 339  
*Sundar Aditya, Rajeshwari S. S, and Giridhar K.*

Monitoring of Environmental Parameters in Nanoelectronic Fabrication 345  
*Mokhloss I. Khadem Khadem and Valentin Sgarciu*

Semi-Blind Dual-Hop Relay Selection based on the First Relaying Hop 349  
*John F. An, Sheng Yang, and Sheng Yuan Wu*

Performance Analysis of MIMO STBC in A High Altitude Platforms Communications Channel 355  
*Iskandar Iskandar and Albaz Rosada*

Coordinated Multi-point Multistream Scheme for Disaster Recovery in MIMO Multi-Cellular Systems 360  
*Tetsuki Taniguchi, Yoshio Karasawa, and Nobuo Nakajima*

Wireless Module for Data Collection 365  
*Alexey Lagunov and Dmitry Fedin*

Communication aspect in ICT for Freight Transport System 370  
*Pushpendra Kumar, Belkacem Ould Bouamama, and Haffaf Hafid*

Performance Analysis of Synchronization for an OFDMA System 376  
*Jihyung Kim, Jung-Hyun Kim, Kwang Jae Lim, and Dong Seung Kwon*

Mobility Load Balancing Scheme based on Cell Reselection 381  
*Toshiaki Yamamoto, Toshihiko Komine, and Satoshi Konishi*

Trust and Energy-aware Routing Protocol for Wireless Sensor Networks 388  
*Laura Gheorghe, Razvan Rughinis, and Nicolae Tapus*

New Traffic Message Delivery Algorithm for a Novel VANET Architecture 395  
*Yueyue Li and Evtim Peytchev*

Evaluating SLAM Approaches for Microsoft Kinect 402

*Corina Kim Schindhelm*

Identifying Sources of Interference in RSSI Traces of a Single IEEE 802.15.4 Channel 408  
*Sven Zacharias, Thomas Newe, Sinead O’Keeffe, and Elfed Lewis*

Dynamic Distributed Resource Allocation in Relay Assisted OFDMA Networks 415  
*Javad Hajipour, Amr Mohamed, and Victor C. M. Leung*

A Prototyping Platform for Spectrum Sensing in China 421  
*Christian Kocks, Alexander Viessmann, Peter Jung, and Chen Lei*

Maximal Ratio Combining SC-FDMA Performance over Correlated Ricean Channels 428  
*Jyoti R. Gangane, Mari Carmen Aguayo-Torres, and Juan J. Sanchez-Sanchez*

Distribution of 2.4 GHz Range Radiowaves Indoors 433  
*Alexey Lagunov and Darina Lagunova*