Table of Contents

MAC Protocols and Mobility Management for Real-time Applications Using Wireless Sensor Networks 1
Muhsin Atto and Chris Guy

The Application and Improvement of Temporally Ordered Routing Algorithm in Swarm Network with Unmanned Aerial Vehicle Nodes 7
Zhongqiang Zhai, Jun Du, and Yong Ren

Towards the Definition of a Mobility-based Clustering Environment for MANET 13
Aida Ben Chehida, Ryma Abassi, and Sihem Guemara

Creating Frame Structures for Position-based Hybrid Routing Algorithm 19
Resul Kara, Ibrahim Ozcelik, Huseyin Ekiz, and Murat Iskefiyeli

An Improved Extended Kalman Filter for Localization of a Mobile Node with NLOS Anchors 25
siamak yousefi, Xiao-Wen Chang, and Benoit Champagne

An Overview of Underwater Sensor Networks 31
Christina Peach and Abdulrahman Yarali

Smart Relay Protocols for Throughput Optimization using AMC in LTE-Advanced Systems 37
Saransh Malik, Sangmi Moon, Bora Kim, Daejin Kim, Youngil Kim, Kunmin Yeo, and Intae Hwang

Second Best Codeword for MIMO Broadcast Channels with Limited Feedback 44
Mouncef Benmimoune, Daniel Massicotte, and Sebastien Roy

Further Results on Channel Estimation Based on Weighted Moving Average in T-DMB Receivers 48
Sung Ik Park, Heung Mook Kim, Jin-Ho Chung, and Jeongchang Kim

Adaptive Reliable Routing Protocol for Wireless Sensor Networks 52
Nourhene Maalel, Pierre Roux, Mounir Kellil, and Abdelmadjid Bouabdallah

Design for a UWB Down-Conversion Mixer for Multi-Band Applications 56
Wu-Shiung Feng, Chin-I Yeh, Prasenjit Chatterjee, and Chen-Yu Hsu

A Microwave Triplexer Based on Coupled Resonators Approach 61
Lidiane S. Araujo and Antonio J. B. de Oliveira

Spectral Resource Sharing for Uncoordinated Networks 65
Ayman Assra and Tricia Willink

Performance Analysis of Coordinated Multi-Point with Scheduling and Precoding schemes in the Heterogeneous Network 70
Bora Kim, Saransh Malik, Sangmi Moon, Daejin Kim, Youngil Kim, Kunmin Yeo, and Intae Hwang

A New Approach for Multistage Analog Complex Filter Design 76
Daniele Grasso and Giuseppe Avellone

QoS-aware Traffic Offloading in 4G/WiFi Multi-RAT Heterogeneous Networks: Opnet-based Simulations and Real Prototyping Implementation 82
Ahmed Ibrahim, Ahmed Darwish, Shady Elbassiouny, and Hani Elgebaly

A Top-Down Heuristic for TCFA Problem in WAN 89
Roza Goscien, Iwona Pozniak-Koszalka, Leszek Koszalka, and Andrzej Kasprzak

Frequency and Time Resource Allocation for Enhanced Interference Management in a Heterogeneous Network based on the LTE-Advanced 95
Sangmi Moon, Bora Kim, Saransh Malik, Cheolsung Kim, Intae Hwang, Kunmin Yeo, and Youngil Kim

A New No Reference Metric for Estimation Video Quality Based on Blur Effect 100
Jean Araujo and Claudio Monteiro

Traffic Steering Framework for Mobile-Assisted Resource Management in Heterogeneous Networks 107
Anton Dogadaev, Aleksandra Checko, Andrijana Popovska Avramova, Anna Zakrzewska, Ying Yan, Sarah Ruepp, Michael Berger, Lars Dittmann, and Henrik Christiansen

A Proposal of Prediction of Peak-Signal-to-Noise-Ratio based on QoS Networks 113
Carlos Junior and Claudio Monteiro

Effective ARP Based Call Admission Control (CAC) Scheme For LTE Systems 119
Abhishek Nayak, Sauarbh Verma, and Anurag Jain

Performance Limitation of HSDPA MIMO by Pre-Coding Induced Phase Distortion 123
Wolfgang Aichmann

Cooperative Communications Using Multilevel Bit-Interleaved Coded Modulations 129
Hadi Sawaya

An Improved MU-MIMO OFDM Scheme for the 3GPP LTE-Advanced Standard 134
Yuechao Wang, Zhanji Wu, and Guanghao Wu

Carrier Frequency Recovery for Oversampled Perfect Reconstruction Filter Bank Transceivers 140
Siavash Rahimi and Benoit Chanpagne

A Semi-Analytical Performance Prediction of Turbo Coded SC-FDMA 146
Fatima Ezzahra Naamane, Mohamed Et-tolba, and Mostafa Belkasmi

The Effect of Human Bodies on Path Loss Model in an Indoor LOS Environment 152
Young-Hoon Kim and Seong-Cheol Kim

Equal Gain Combining SC-FDMA Performance over Correlated Shadowed Rice Land Mobile Satellite Channel 157
Jyoti Gangane, Mari-Carmen Aguayo-Torres, Juan Sanchez-Sanchez, and Francisco Blanquez-Casado4

Linear Node Movement Patterns in MANETS 162
Mohammed Alzaylaee, John DeDourek, and Przemyslaw Pochec

A Proposed Real–Time Scheduling Algorithm for WiMAX Networks 167
Nada Elshennawy, Mostafa Youssef, Mohamed El-Derini, and Mahmoud Fahmy

On the Performance of Selective Decode and Forward Relaying over Imperfectly Known Fading Relay Channels 173
Ali Zarei Ghanavati and Daniel Lee

Fast Association Scheme over IEEE 802.15.4 based Mobile Sensor Network 179
Pranesh Sthapit, Yeon-Sang Choi, Goo-Rak Kwon, Jae-Young Pyun, and Suk-seung Hwang

An Application of Second-Order Reed-Muller Codes for Multiple Target Localization in Wireless Sensor Networks 185
Thu Lam Ngoc Nguyen, Jaejin Lee, and Yoan Shin

Bit Error Rate Analysis of MIMO Schemes in LTE Systems 190
Ali Jemmali, Jean Conan, and Mohammad Torabi

The Performance Analysis of Complex SSC/MRC Combiner in Rice Fading Channel 195
Dragana Krstic, Petar Nikolic, Aleksandar Stevanovic, and Goran Stamenovic

Intercell Interference Coordination for the ePDCCH in LTE-Advanced Macrocellular Deployments 200
David Gonzalez G, Mario Garcia-Lozano, and Silvia Ruiz Boque

Modeling and Simulation of Radio Signals Attenuation Using Informed Virtual Geographic Environments 209
Mehdi Mekni

A New Physical Cell Indetifier Structure in Femtocell Networks 217
Robert Bestak

A New Bio-Crypto System Approach to Enhance Security Of 4G Mobile Networks 222
Saeed Ashry, Abdulatif Elkouny, Hesham Elbadawy, Salwa Elramly, and Ahmed El-Sherbini

The Advantage of Moving Nodes in Formations in MANETs and M2ANETs 228
Abdullah Alshehri, Przemyslaw Pochec, and John DeDourek

BER Performance of BICM-coded Cooperative Networks with Selection Decode-and-Forward Relaying over Nakagami-m Fading Channels 233
Tsang-Wei Yu and Wern-Ho Sheen

High-Level Energy Saving Strategies for Mobile Location-Based Services on Android Devices 238
Wolfgang Narzt

Efficient Mobility Management in 6LoWPAN Wireless Sensor Networks 244
Abdelwahed Berguiga and Habib Youssef

Mobile Ad-Hoc Search and Retrieval in the iTrust over Wi-Fi Direct Network 251
Isai Michel Lombera, Louise Moser, Peter Melliar-Smith, and Yung-Ting Chuang

Proposal to Reduce the Computational Cost of Wireless Network Selection Process 259
Francirley Borges and Claudio Monteiro

Challenges of Operationalizing PACS on Cloud Over Wireless Networks 265
Ricardo Ferraro de Souza, Carlos Becker Westphal, Daniel Ricardo dos Santos, and Carla Merke Westphall