

2011 Wireless Telecommunications Symposium

(WTS 2011)

**New York City, New York, USA
13 – 15 April 2011**



**IEEE Catalog Number: CFP11WTS-PRT
ISBN: 978-1-4577-0162-7**

TABLE OF CONTENTS

An Efficient Correction of Carrier Frequency Offset and Sample Timing Offset by Feedback Method	1
<i>Huikyu Lee, Heung-Gyoon Ryu</i>	
Algorithms to Accelerate Rare Event Simulation with Markov Chain Modeling in Wireless Telecommunications Networks	6
<i>Izabella Lokshina</i>	
ExBCG-TC: Extended Borel Cayley Graph Topology Control for Ad-hoc Sensor Networks	12
<i>Dongsoo Kim, Jaewook Yu, Eric Noel, K. Wendy Tang</i>	
Ad Hoc M2M Communications and Security based on 4G Cellular System	20
<i>Mahdy Saedy, Vahideh Mojtahed</i>	
Cross Layer Design for Multimedia Streaming over Wireless 802.11e Networks	25
<i>Hong Zhao, Nirwan Ansari</i>	
Telco 2015 Re-envision the Future of Mobile Communications	31
<i>Rob Van Den Dam, Ekow Nelson</i>	
Cramer-von Mises Test based Spectrum Sensing for Cognitive Radio Systems	39
<i>Thuc Kieu-Xuan, Insoo Koo</i>	
Fusing Multi-Layer Metrics for Detecting Security Attacks in 802.11 Networks	43
<i>Konstantinos G. Kyriakopoulos, Francisco J. Aparicio-Navarro, David J. Parish</i>	
Throughput Optimization in Wireless Multihop Networks with Successive Interference Cancellation	49
<i>Patrick Mitran, Catherine Rosenberg, Samat Shabdanov</i>	
Femtocell Power Control by Discrimination of Indoor and Outdoor Users	56
<i>Kyong-Tak Cho, Junsik Kim, Gwangil Jeon, Byung Han Ryu, Namhoon Park</i>	
Time Varying Convolutional Codes for Punctured TurboCodes	62
<i>Yannick Saouter, Claude Berrou</i>	
Fountain Codes with Message Passing and Maximum Likelihood Decoding over Erasure Channels	67
<i>Weizheng Huang, Huanlin Li, Jeffrey Dill</i>	
MacroFemto Cell Handover with Enhanced QoS in Mobile WiMAX	72
<i>Rami Ellouze, Mourad Gueroui, Adel M. Alimi</i>	
Multi-service Load Balancing in a Heterogeneous Network	78
<i>Jie Xu, Yuming Jiang, Andrew Perkis</i>	
A Monolithic LTE Interleaver Generator for Highly Parallel SMAP Decoders	84
<i>Thomas Inseher, Matthias May, Norbert Wehn</i>	
Experimental Optical Code-Division Multiple Access System for Visible Light Communications	88
<i>Marcos F. Guerra-Medina, Borja Rojas-Guillama, Oswaldo Gonzalez, Jesus A. Mart n-Gonzalez, Enrique Poves, Francisco J. Lopez-Hernandez</i>	
Improving TurboCode Performance by Cross-entropy	94
<i>Yannick Saouter</i>	
On the Modified Teager-kaiser Energy Operator Regarding Narrowband Interference	98
<i>Hanns-Ulrich Dehner, Holger Jakel, Friedrich K. Jondral</i>	
BER Analysis of OFDM Signals on Frequency-Selective Rician Fading Channels	103
<i>Zhiwei Mao, Julian Cheng</i>	
Stable Move Algorithm (SMA) for BW Allocation in Wireless Mobile WiMAX Networks 802.16e	108
<i>Ihsan Shahwan, M. Ali, Muath Obaidat, Roger Dorsinville</i>	
On the Optimal Subcarrier Mapping Scheme in OFDM Decode-and-Forward Relay Systems	115
<i>Enis Kocan, Milica Pejanovic-Djurisic, Zoran Veljovic</i>	
A New Medium Access Protocol for RFID Networks with Foresight	120
<i>Fariha Baloch, Hoang Dang, Edwin Sawan, Ravi Pendse</i>	
Optimum Selective Mapping for PAPR Reduction	127
<i>Y. Wu, K. L. Man, Y. Wang</i>	
Intelligent Mechanisms for Key Generation from Multipath Wireless Channels	132
<i>Youssef El Hajj Shehadeh, Omar Alfandi, Kifah Tout, Dieter Hogrefe</i>	
A Novel High Throughput Long Training Field Sequence Design for Next-Generation WLAN.pdf	138
<i>Wenxuan Zhang, Jing Wang, Guixia Kang</i>	
A Software-Defined Radio Based on the Unified SMSE Framework	143
<i>R. J. Graessle, C.-H. Cheng</i>	
Space-Time Block Coding with Symbol-Wise Decoding for Polynomial Phase Modulated Signals	149
<i>Omar Granados, Jean, Rian</i>	
Notification based S-CSCF load Balancing in IMS Networks	156
<i>Isam Abdalla, S. Venkatesan</i>	

First Results of a Leaky Coaxial Cable Prototype for Indoor Positioning	161
<i>Julia Engelbrecht, Ralf Collmann, Ulrich Birkel, Mark Weber</i>	
Average Efficiency of Power Amplifiers in Power-Controlled Systems with Multi-Antenna Diversity	166
<i>Olli Apilo, Mika Lasanen, Aarne Mammela, Friedrich K. Jondral</i>	
Performance of Orthogonal Sub Channel with Dynamic Frequency and Channel Allocation	172
<i>Jyrki T. J. Penttinen, Francesco D. Calabrese, Sebastian Lasek, Dariusz Tomeczko, David Valerdi, Iñigo Güemes</i>	
Validation of ITU-T P.863 for Low Bit-rate Coded Speech Quality Measurements	178
<i>Jan Holub</i>	
Generic Approach for Hierarchical Modulation Performance Analysis: Application to DVB-SH	180
<i>Hugo Meric, Jerome Lacan, Caroline Amiot-Bazile, Fabrice Arnal, Marie-Laure Boucheret</i>	
Wireless Medication Management System: Design and Performance Evaluation	186
<i>U. Varshney</i>	
Experimental Study on Protection Distances between LTE and DVB-T Stations Operating in Adjacent UHF Frequency Bands	194
<i>A. Aloisi, M. Celidonio, L. Pulcini, A. Rufini</i>	
Power Allocation Strategies for SVD Multicell MIMO-OFDM Based Systems	201
<i>Reza Holakouei, Adão Silva, Atilio Gameiro</i>	
Quantitative Analysis of Propagation Characteristics for Mobile WiMAX	208
<i>Pradhumna Lal Shrestha, Puttipong Mahasukhon, Michael Hempel, Tao Ma, Hamid Sharif</i>	
Uplink System Capacity of a Cellular Network with Cooperative Mobile Relay	213
<i>Kiran Vanganuru, Matthew Puzio, Gregory Sternberg, Kandarp Shah, Samian Kaur</i>	
Decision Directed Recursive Least Square Adaptive Channel Estimation for OFDMA Uplink System	220
<i>Sung Sue Hwang, Sang Seok Yun, Suk Chan Kim</i>	
A Reliable, Energy Efficient Memory Repository built from an Unreliable Distributed Sensor Network	224
<i>Paul Gaynor, Daniel Coore</i>	
Using Social Media to Study Social Phenomena: an Example using Twitter Data	229
<i>C. Whitlaw, M. Agrawal, H. R. Rao, O. Oh</i>	
A Distributed Collision-Free Time Slot and Channel Assignment Algorithm for OFDM/TDMA Wireless Relay Networks	232
<i>Vida Ferdowsi, Kenneth Mitchell</i>	
OSSIE/GNU Radio Generic Component	238
<i>Duyun Chen, Garrett Vanhoy, Marypat Beaufait, Carl Dietrich</i>	
Fountain Code based AL-FEC for Multicast Services in MANETs	243
<i>Elena Mammì, Veronica Palma, Alessandro Neri, Marco Carli</i>	
A Two-dimensional Medium Access Control Protocol based on OFDMA and CSMA/CA	250
<i>Jing Wang, Guixia Kang, Ping Zhang</i>	
Routing Approaches and Performance Evaluation in Delay Tolerant Networks	255
<i>Annalisa Sociévole, Floriano De Rango, Carmine Coscarella</i>	
Node ID Assignment in Group Theoretic Graphs for WSNs	261
<i>Junghun Ryu, Jaewook Yu, Eric Noel, K. Wendy Tang</i>	
A Novel Scalable Software Platform on Android for efficient QoS on Android Mobile Terminals based on Multiple Radio Access Technologies	269
<i>Suman Kumar, S. Vijay Anand</i>	
Efficient Resource Allocation for MIMO-OFDMA based Cognitive Radio Networks	275
<i>H. Shahrokh Shahraki, Kamal Mohamed-Pour, Lorenzo Vangelista</i>	
Combined Source-Channel Transform for Image Transmission Over Wireless Channel	281
<i>Mike Sabelkin, Francois Gagnon</i>	
Optimizing the Combination of MBSFN and PTM Transmissions in LTE Systems	285
<i>Antonios Alexiou, Christos Bouras, Vasileios Kokkinos, Andreas Papazois, Georgia Tseliou</i>	
Optimized Iterative (Turbo) Reception for QAM OFDM with CFO over Unknown Double-Selective Channels	292
<i>Thomas Ketsoglou, Henk Wymeersch</i>	
On the Performance of Linear and Nonlinear Companding Transforms in OFDM Systems	297
<i>Yasir Rahmatallah, Nidhal Bouaynaya, Seshadri Mohan</i>	
Effect of the Number of Clusters on the Performance of COoperative Network Coding	302
<i>G. E. Arrobo, R. D. Gitlin</i>	
Wireless Channel Characterization for a Home Indoor Propagation Topology at 2.4 GHz	306
<i>Theofilos Chrysikos, Giannis Georgopoulos, Stavros Kotsopoulos</i>	
An Integrated Access Network Infrastructure Combining Femtocells to Existing Cabled Networks	316
<i>D. Di Zenobio, M. Celidonio, L. Pulcini, A. Rufini</i>	

Optimized Dual Low Power Listening for Extending Network's Lifetime in Multi-Hops Wireless Sensor Networks	321
<i>Andrea Abrardo, Lapo Balucanti, Alessandro Mecocci</i>	
Noncooperative Distributed MMSE Relay Schemes under Jamming Environment and Node Geometry in Wireless Relay Networks	328
<i>Kanghee Lee, Hyuck M. Kwon, Yanwu Ding, Yazan Ibdah, Zuojun Wang</i>	
System Policies for Gradual Tuning of Security and Workload in Wireless Sensor Networks	333
<i>Antonio Vincenzo Taddeo, Luis Germán García Morales, Alberto Ferrante</i>	
Transmitter Preprocessing Assisted Multi-cell MIMO Downlink Communication over Correlated Frequency-Selective Channels	339
<i>Prabagarane Nagaradjane Sabarish Karthik Prasaanth Muralidharan Yuvika Ashwina Rajan</i>	
Performance Analysis of Opportunistic Spectrum Access in Heterogeneous Wireless Networks	344
<i>Qingyan Xie, Qing-An Zeng</i>	
Secure Scheme during Vertical Handoff in Integrated Heterogeneous Wireless Systems	349
<i>Nidhi Rastogi, Qing-An Zeng, Xiaolong Li</i>	
A Prediction Model of Merger & Acquisitions in the US Telecommunications Industry: -A Case Study of a Recent M&A in Wireless Communications Sector	354
<i>Ye Ouyang, M. Hosein Fallah</i>	
Wireless Communications in Olympic Games: R&I Into the Frame of the Updated Gatekeeping Model	365
<i>Vassiliki Cossivelou, Philemon Bantimaroudis, Evaggelia Kavakli, Laura Illia</i>	
From Wireless to Integrated Telecommunications in Latin America: a Market-Based Analysis of America Movil	370
<i>Steven R. Powell</i>	
Adaptive Rateless Coding for Constant Bit Rate Data-Partitioned Wireless IPTV	381
<i>L. Al-Jobouri, M. Fleury, M. Ghanbari</i>	
A "Virtual SONET" Routing Architecture for Ad Hoc Networks in Environmental Monitoring and Emergency Management	387
<i>Michael Bartolacci, Elizabeth Avery-Gomez</i>	
Using RFID for Anti-Theft in a Chinese Electrical Supply Company: A Cost-Benefit Analysis	392
<i>B. Khoo, Y. Cheng</i>	
Effect of Uncertainties in Modeling Interferences in Spectrum Sensing	398
<i>Ezio Biglieri</i>	
A Fast and Efficient Adaptive Channel Equalizer for OFDM-Based Wireless Relay System	399
<i>Faramarzasharif, Shiro Tamaki, Mohammad Reza Alsharif, Heung Gyoonyryu</i>	
Performance Analysis of Dual Diversity over Correlated Ricean Fading Channels	400
<i>Maja Ilic-Delibasic, Milica Pejanovic-Djurisic, Enis Kocan</i>	
Author Index	