



ICWMC 2014

The Tenth International Conference on Wireless and Mobile Communications

June 22 - 26, 2014

Seville, Spain

ICWMC 2014 Editors

Dragana Krstic, University of Nis, Serbia

Mari Carmen Aguayo Torres, University of Malaga, Spain

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2014) by International Academy, Research, and Industry Association (IARIA)
Please refer to the Copyright Information page.

Printed by Curran Associates, Inc. (2014)

International Academy, Research, and Industry Association (IARIA)
412 Derby Way
Wilmington, DE 19810

Phone: (408) 893-6407
Fax: (408) 527-6351

petre@iaria.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

ICWMC 1: MODELING AND PERFORMANCE I

Multi-Agent Topology Approach for Distributed Monitoring in Wireless Sensor Networks	1
<i>B. Rachid, H. Hafid, C. Pham</i>	
Outage Performance and Derivation due to Adjacent Channel Interference	10
<i>Y. Yoon, Y. Chong</i>	
Uplink Performance Evaluation of Broadband Systems which Adopt a Massive MU-MIMO Approach	14
<i>P. Torres, L. Charrua, A. Gusmao</i>	
Evaluative Study of Detect-Split-Forward Scheme over MIMO Relays	20
<i>S. Al-Basit, S. Al-Ghadhban, S. Zummo</i>	

ICWMC 2: MODELING AND PERFORMANCE II

On the SC/FDE Uplink Alternative to OFDM in a Massive MU-MIMO Context	26
<i>P. Torres, L. Charrua, A. Gusmao</i>	
Capacity Estimation of IEEE 802.15.4 Chains of Sensor Nodes	32
<i>E. Chatzistavros, G. Stamatelos</i>	
Performance Enhancement of Heterogeneous Networks via Dense Clusterization and Higher Order Modulation	37
<i>A. Elhamy, A. Ibrahim</i>	
Using GSPNs for Performance Evaluation of Networks with Repeated Calls and Different Vacation Policies	43
<i>N. Gharbi</i>	

ICWMC 3: MODELING AND PERFORMANCE III

Level Crossing Rate of MRC Receiver Over k-μ Multipath Fading Environment	50
<i>D. Krstic, I. Temelkovski, S. Maricic, D. Radenkovic, V. Milenkovic</i>	
Statistical Analysis and Re-Generation of the Radiated Disturbances from Multiple Noise Sources	55
<i>S. Choi, J. Kwon</i>	
Modeling and Performance Evaluation of Scheduling Algorithms For Downlink LTE Cellular Network	60
<i>B. Nsiri, M. Nasreddine, M. Ammar, W. Hakimi, M. Sofien</i>	
Channel Estimation for Downlink LTE System Based on LAGRANGE Polynomial Interpolation	65
<i>M. Nasreddine, N. Bechir, W. Ammar</i>	
Reception for Layered STBC Architecture in WLAN Scenario	70
<i>P. Remlein, H. Felcyn</i>	

ICWMC 4: DESIGN AND IMPLEMENTATION

A Wideband Envelope Modulator Design for Envelope-Tracking SiGe Power Amplifier (ET-PA) for Broadband Wireless Applications	76
<i>Y. Li, J. Lopez, D. Lie</i>	
Fully Functional Passive RFID Tag with Integrated Sensor for Item Level Tagging Based on Collective Communications and Organic Printed Electronics	84
<i>P. Jakimovski, A. Hadda, M. Zangl, N. Oertel</i>	
An End-to-End QoS Performance Evaluation of VoLTE in 4G E-UTRAN-Based Wireless Networks	90
<i>M. Tabany, C. Guy</i>	

ICWMC 5: WIRELESS AND MOBILITY

Enhancing the Vector-Based Forwarding Routing Protocol for Underwater Wireless Sensor Networks: A Clustering Approach	98
<i>D. Ibrahim, T. Eltobely, M. Fahmy, E. Sallam</i>	
On-Demand Data Collection in Sparse Underwater Acoustic Sensor Networks Using Mobile Elements	105
<i>M. Jalaja, J. Lillykutty</i>	

ICWMC 6: WIRELESS AND MOBILE TECHNOLOGIES I

On Type II Hybrid-ARQ with Decode and Forward Relay using Non-Binary Rate-Compatible Punctured LDPC Code on MIMO SC-FDMA Up-Link	112
<i>T. Hamada, Y. Iwanami</i>	
Interference Management for D2D Communications Underlying Cellular Networks at Cell Edge	118
<i>B. Guo, S. Sun, Q. Gao</i>	
Optimization in Backoff Technique for IEEE 802.15.4/ ZigBee Networks	124
<i>M. Yassein, Y. Khamayseh, M. Fakirah, G. Mohsen</i>	

ICWMC 7: WIRELESS AND MOBILE TECHNOLOGIES II

Circuit-Switched Voice over Scalable UMTS	129
<i>S. Das, Y. Huang, E. Park, S. Soliman</i>	
Non-Frequency-Selective I/Q Imbalance in Zero-IF Transceivers for Wide-Band mmW Links	136
<i>A. Rezola, J. Sevillano, R. Berenguer, I. Velez, M. Leyh, M. Lorenzo, A. Vargas</i>	
A Distributed Algorithm for In-Network Adaptive Estimation Using Incremental Aggregated Gradient	142
<i>W. Bazzi, A. Rastegarnia, A. Khalili, S. Sanei</i>	
Channel Inversion CoMP Technique in Cellular System: A User-Selection Algorithm	147
<i>J. Gomez, M. Aguayo-Torres, F. Blaquez-Casado, F. Martin-Vega</i>	
Enhancement of A5/1 Stream Cipher Overcoming its Weaknesses	154
<i>M. Madani, S. Chitoub</i>	

ICWMC 8: PROTOCOLS FOR WIRELESS AND MOBILITY

Enhancing Safety-Critical Message Dissemination in WAVE	160
<i>D. Neville, J. Brill, J. Juzl, C. Howell, V. Sanchez</i>	
Investigating Bit Error Patterns for Radar Pulse Detection in IEEE 802.11	164
<i>C. Pisa, A. Garcia-Saavedra, D. Leith</i>	
Cross-Platform End-to-End Encryption of Contact Data for Mobile Platforms using the Example of Android	168
<i>M. Hofmarcher, M. Straub, W. Narzt</i>	
Problematic of QoS-Based On-Demand Routing Protocols to Improve Communication in Mobility Context	174
<i>T. Yelemou, T. Dandjinou</i>	

ICWMC 9: MANAGEMENT OF WIRELESS AND MOBILE NETWORKS

A Channel-Aware Uplink Scheduling Algorithm for Mobile WiMAX Networks	180
<i>N. El-Shennawy, M. El-Derini, M. Fahmy, M. Youssef</i>	
Novel Pico-Cell Range Expansion with Adaptive RACH Resource Allocation for Random Access of M2M Devices	186
<i>W. Jo, C. Oh, Y. Kim, T. Lee</i>	
Insights into Cellular Networks: Anatomy of Traffic Profiles	192
<i>W. Wajda</i>	
Classifying Users Based on Their Mobility Behaviour in LTE Networks	198
<i>B. Sas, K. Spaey, C. Blondia</i>	
Author Index	