

2009 4th International Symposium on Wireless Pervasive Computing (ISWPC)

**Melbourne, Australia
11 – 13 February 2009**



**IEEE Catalog Number: CFP09WIP-PRT
ISBN: 978-1-4244-4299-7**

TABLE OF CONTENTS

8K-point Pipelined FFT/IFFT with Compact Memory for DVB-T using Block Floating-point Scaling Technique	1
<i>H. Kim, J. Youn, K. Yoon, J. Choi</i>	
A Centralized Traffic Control Mechanism for Evacuation of Emergency Vehicles Using the DSRC Protocol	6
<i>C. Huang, C. Yang, C. Tseng, C. Chou</i>	
A Comparative Analysis on the Signaling Load of Proxy Mobile IPv6 and Hierarchical Mobile IPv6	11
<i>M. Yi, J. Choi, Y. Yang</i>	
A Hybrid Approach for Robust Traffic Engineering	16
<i>H. Agrawal, A. Jennings, Q.D. Bui</i>	
A Low Voltage, Low Power Linear Pseudo Differential OTA for UHF Applications	21
<i>A. Kavala, P.N. Kondekar</i>	
A Multi-Dimensional Architectural Approach to Behavior-Intensive Adaptive Pervasive Applications	25
<i>N. Aoumeur, K. Barkaoui, G. Saake</i>	
A Novel Frequency-Domain Channel Parameters Estimation Method by Time-Domain Pilots Inserting for OFDM Systems	33
<i>T. Chen, M. Wang, Y. Fang</i>	
A Novel Network Selection Algorithm of Service-Based Dynamic Weight Setting	38
<i>H. Cui, L. Zhu, S. Yang, J. Li</i>	
A Parametric POMDP Framework for Efficient Data Acquisition in Error Prone Wireless Sensor Networks	43
<i>S. Chobsri, W. Sumalai, W. Usaha</i>	
A Proposed RED-based Scheduling Scheme for QoS in WiMAX Networks	48
<i>P. Ting, C. Yu, N. Chilamkurti, T. Wang, C. Shieh</i>	
A Sensor Network for Surveillance of Disaster-hit Region	53
<i>T. Miyazaki, R. Kawano, Y. Endo, D. Shitara</i>	
A Simple and Optimum Geometric Decoding Algorithm for MIMO Systems	59
<i>Z.Y. Shao, S.W. Cheung, T.I. Yuk</i>	
A Switching Estimated Receiver Position Scheme For Visible Light Based Indoor Positioning System	64
<i>C. Serthrin, E. Tsuji, M. Nakagawa, S. Kuwano, K. Watanabe</i>	
Adaptive Token Polling MAC Protocol for Wireless Underwater Networks	69
<i>G.E. Burrowes, J.Y. Khan</i>	
An Efficient Algorithm for Context-Aware End-to-End Connectivity Management	74
<i>J. Sen, A. Ukil</i>	
An Efficient MAC Protocol for Throughput Enhancement in Dense RFID System	79
<i>G.P. Joshi, S.W. Kim</i>	
An Efficient MBMS Content Delivery Scheme over the HSDPA Network	84
<i>A. Chaudhry, J.Y. Khan</i>	

An Efficient Multilevel Coverage Scheme in Mobile Sensor Networks	89
<i>J. Cho, S. Kwon, J. Ko, C. Kim</i>	
An Energy-Effective Routing Protocol for Mobile P2P Systems	93
<i>J. Lee, J. Song, Y. Lee, S. Yang</i>	
An Individual Data Extraction Model for Objects Used by a Number of People	98
<i>H. Kawasaki, R. Ohmura, H. Osawa, M. Imai</i>	
An Integrated Load Balancing Scheme for Future Wireless Networks	103
<i>E.H. Ong, J.Y. Khan</i>	
Antenna Polarization as Complementarities on RSSI Based Location Identification	109
<i>X. Huang</i>	
Body Temperature and Electrocardiogram Monitoring Using an SMS-Based Telemedicine System	114
<i>A.A. Tahat</i>	
Case Study: Trust Establishment in Personal Area Networks	119
<i>Y. Yang, L. Xiao, Y. Kim, D. Julian</i>	
Closed-Form Outage Probability Analysis of a Diamond Relay Network with Opportunistic Spectrum Access	124
<i>N.A. Surobhi, M. Faulkner</i>	
Collision Avoidance Multi-rate MAC Protocol: Solving Performance Anomaly in Multi-rate network	129
<i>J. Sung, C. Ke, N. Chilarnkurti, Y. Huang</i>	
Comparison of Downlink Throughput Distributions between Frequency Reuse Factors of One and Three in MBWA System Field Trial	134
<i>H. Oguma, S. Kameda, T. Takagi, K. Tsubouchi, N. Izuka, Y. Asano, Y. Yamazaki</i>	
Connectivity Analysis Under Shadowing in Wireless Networks with Data Correlation Topology Control	139
<i>S.A. Bermudez, S.B. Wicker</i>	
Context-Aware Dynamic Reconfiguration of Mobile Patient Monitoring Systems	144
<i>H. Mei, B. Van Beijnum, P. Pawar, I. Widya, H. Hermens</i>	
Degraded Link-disjoint Multipath Routing in Ad Hoc Networks	149
<i>J. Cai, W. Wu</i>	
Doppler Frequency Offset Estimation in OFDM Systems	154
<i>H. Hwang, H. Park</i>	
Dynamic Parameter Setting for End-to-End TCP Enhancement Schemes Over Mixed Wired/Wireless Networks	158
<i>C. Cheung</i>	
Effectiveness of Asynchronous Channel Assignment Scheme in Heterogeneous WLANs	163
<i>M. Drieberg, F.C. Zheng, R. Ahmad, S. Olafsson, M. Fitch</i>	
Efficient Database Reduction Method of Building Recognition using Global Positioning System On Mobile Device	168
<i>B. Lim, J. Kim</i>	
Enabling Service Continuity on Future Mobile Services	173
<i>N.S.K. Bashah, I. Jorstad, D. Van Thanh</i>	
FMIPv6 based Secure Binding Update Authentication in Wireless Vehicular Networks	180
<i>S. Lee, J. Choi, N. Park</i>	

Grid-Based Energy-Efficient Routing from Multiple Sources to Multiple Mobile Sinks in Wireless Sensor Networks	185
<i>K. Kweon, H. Ghim, J. Hong, H. Yoon</i>	
Improved Pilot-Aided Channel Estimation in Zero Padded MC-CDMA Systems	190
<i>D.F. Cardoso, F.D. Backx, R. Sampaio-Neto</i>	
Improving Real-Time GPS by Incorporating TelegraphCQ in Jandroid Architecture	195
<i>M.A. Qadeer, N. Akhtar, F. Khan, E. Baratte</i>	
Investigation of the LO Phase-Noise Effect and RF System Simulation for A 60-GHz Wireless Non-Contact Human Vital-Signal Detection System	200
<i>P.H. Lien, F.L. Lin, H.R. Chuang</i>	
Iterative Bandwidth Limitation for High Efficiency EER Power Amplifier	204
<i>A.K. Mustafa, M. Faulkner</i>	
Key Management for Lightweight Ad-hoc Routing Authentication	209
<i>D.T. Nguyen, B. Soh</i>	
Large Multimedia Artifacts Prebuffering in Mobile Information Systems as Location Context Awareness	216
<i>O. Krejcar</i>	
Meshed Multipath Routing with Leveling in Route Discovery: An Efficient Strategy in Wireless Sensor Networks	221
<i>T.N.S. Krishna, R.M. Garimella</i>	
MIMO UWB-IR Noncoherent Transceiver with Poisson Wireless Models	226
<i>X. Huang, D. Sharma</i>	
Mitigating Effects of Node Failure via Mobility in Wireless Networks	231
<i>E. Yanmaz</i>	
Modelling Energy Consumption of Relay-Enabled MAC Protocols in Ad Hoc Networks	236
<i>R. Ahmad, F.C. Zheng, M. Drieberg, S. Olafsson, M. Fitch</i>	
Multi-Dimensional Beamforming for Adaptive MIMO Systems	242
<i>M. Gheryani, Z. Wu, Y.R. Shayan</i>	
Performance Evaluation of a Cognitive Radio Network with Exponential and Truncated Usage Modes	244
<i>W. Ahmed, J. Gao, M. Faulkner</i>	
Performance Improvement by Efficient Polling in WiMAX Network	249
<i>F. Yin, G. Pujolle, K. Chen</i>	
Performance of Adaptive MIMO System Based on Beam-Nulling	254
<i>M. Gheryani, Z. Wu, Y.R. Shayan</i>	
Performance of SIR-Based Power Control in a WCDMA Enhanced Uplink System with the Hybrid ARQ Technique	258
<i>M. Eljamai, M. Ammar, M. Ettolba, S. Saoudi</i>	
PlaceSense: A Tool for Sensing Communities	263
<i>T. Nguyen, S.W. Loke, T. Torabi, H. Lu</i>	
Potential Architecture for Future Generation ‘Green’ Wireless Base Station	268
<i>V. Bassoo, K. Tom, A.K. Mustafa, E. Cijvat, H. Sjoland, M. Faulkner</i>	
QoS Support over IEEE 802.11e in Multirate Networks	273
<i>H. Liang, N.K. Chilamkurti, S. Zeadally, C. Ke</i>	
Quantum Cryptography for Wireless Network Communications	278
<i>X. Huang, S. Wijesekera, D. Sharma</i>	

Seamless Handoff Support for Real-Time Applications in the Next-generation Wireless Access Network Architecture	283
<i>S. Lee, Y. Jeon, T. Lim, J. Park</i>	
Securing Data Transfer in Delay-sensitive and Energy-aware WSNs Using the Scalable Encryption Algorithm	288
<i>N. Bandirmali, I. Erturk, C. Ceken</i>	
Security Architecture for IEEE 802.15.4-based Wireless Sensor Network	294
<i>T. Shon, B. Koo, H. Choi, Y. Park</i>	
SER Analysis and Power Allocation of OSTBC-OFDM With Channel Estimation Error	299
<i>H. Maleki, N. Said</i>	
Speaker Recognition using Speaker-independent Universal Acoustic Model and Synchronous Sensing for "Business Microscope"	304
<i>J. Nishimura, T. Kuroda</i>	
Supporting Dynamic Application Programming Environment In Distributed Sensor Networks	309
<i>Y. Choi, S. Hong, J. Jun, S. Jin</i>	
Throughput Maximization with Multiuser Non-selfish Cognitive Relaying in CR Networks	313
<i>P. Gong, J.H. Park, J.M. Yoo, B. Yu, D.K. Kim</i>	
Towards Proactive Context-Aware Service Selection in the Geographically Distributed Remote Patient Monitoring System	318
<i>P. Pawar, B. Van Beijnum, H. Mei, H. Hermens</i>	
Using Debt Mechanism to Achieve Proportional Delay and Loss Differentiation in a Wireless Network with a Multi-state Channel	326
<i>Y. Szu</i>	
Wireless Sensor Networks for Voice Capture in Ubiquitous Home Environments	332
<i>L.E. Palafox, J.A. Garcia-Macias</i>	
ZigBee Networks Performance Under WLAN 802.11b/g Interference	337
<i>G. Yang, Y. Yu</i>	
Author Index	