

International Association of Science
and Technology for Development

IASTED International Conference on Communication Systems, Networks, and Applications 2007

October 8-10, 2007
Beijing, China

Printed from e-media with permission by:

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

ISBN: 978-1-60423-436-7

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

TABLE OF CONTENTS

NETWORK ARCHITECTURE

COSE: Combined Opportunistic Scheduling, Encoding Strategy for Network Coding	1
<i>Y. Ma, W. Li, P. Fan, K.B. Letaief, X. Liu</i>	
Fast Vertical Handover Mechanism for Hierarchical Mobile IPv6 in Heterogeneous Wireless Access Networks	7
<i>P.-S. Kim, S.-E. Kim, J.S. Jin, S.-C. Lee, S.H. Lee</i>	
Networked Intelligent Control System using Smart MCC & LonWorks/Ethernet Server for Operating Multi-Induction Motor of Industrial Field	12
<i>W.P. Hong, W. Dunford</i>	
Bandwidth Optimization Control Protocol for 4G Wireless Mobile Internet	19
<i>X. Li, R. Salleh, A.-S. Mahmoud</i>	
A Spontaneous Sensor Network Architecture based on OSGI, XML	25
<i>A. Lin, Z. Miao</i>	
Performance Analysis of High-Speed TCP Protocols BIC, CUBIC with AQM in Lossy Networks	31
<i>M. Escheikh, K. Barkaoui</i>	
Impact of Bounded Delays on Resource Consumption in VoIP Networks	36
<i>L. Wang, P.K. Verma</i>	
Individual Workforce Scheduling Architecture: A Case Study at KT	42
<i>D.C. Lee</i>	
Efficient Packet Replication, Switching of Multicast Traffic by Shared-Crosspoint Packet Switches	48
<i>Z. Dong, R. Rojas-Cessa</i>	
Implementation of a Parallel-Search Trie-based Scheme for Fast IP Lookup	54
<i>R. Rojas-Cessa, L. Ramesh, Z. Dong, B. D'Alessandro, N. Ansari</i>	

BROADBAND COMMUNICATIONS

Fast Image Compression based on (2D)2 PCA	57
<i>N. Wang, X. Li, S.-y. Li, Y.-j. Cui</i>	
Code Tracking Loop using RAKE Reception in DS/SS System, Application for DS/UWB System	62
<i>S. Tachikawa, K. Oyama</i>	
Characteristics of M-ary/OFDM Communication Systems	67
<i>H. Murata, S. Tachikawa</i>	
A MIMO Receiver for WiMAX System	73
<i>X. Yu</i>	
Robust Nonlinear Echo Canceller with Adaptive Volterra Filter Applying VAD, Echo-Path Delay Estimation	79
<i>M.A. Tinati, T.Y. Rezaei, A. Rastegarnia</i>	

Low Complexity LDPC Decoding Scheme for DMB-TH	84
<i>M. Li, J. Yang</i>	
Numerical Simulation of Multi-Access Interference in 2D Optical CDMA System with Bipolar Codewords	90
<i>J. Chovan, F. Uherek</i>	
Receive Antenna Selection Algorithm to Improve Error Performance in MIMO Systems with Linear Receivers	96
<i>M.A. Tinati, A. Rastegarnia, T.Y. Rezaii</i>	
Capacity, Fairness of an Ad Hoc IEEE 802.11 Cell with Sophisticated Noncooperative Stations.....	100
<i>J. Konorski</i>	
Evaluation of Microbending Loss, Refractive Index Changes Due to Temperature Rise, Young's Modulus Variations of Coating Material in Double-Coated Optical Fibers.....	107
<i>F.E. Seraji, G. Toutian</i>	
 NETWORK SECURITY	
Stronger Authentication in e-Commerce: How to Protect Even Naïve User against Phishing, Pharming, MITM Attacks	111
<i>C. Latze, U. Ultes-Nitsche</i>	
Security System for Passive IP Devices on SIP based Network.....	117
<i>J.J. Kong, D. Lou, T. Yeap</i>	
A Novel Audio Digital Watermarking Algorithm based on U Systems.....	121
<i>J. Zou, J. Zhang</i>	
A Novel Video Scrambling Algorithm based on the Generalized Fibonacci Transformations.....	125
<i>J. Zhou, Z. Chen</i>	
Worldwide Authentication, Tracking: A Secured Mobile Payment System Implemented using a Biometrics Approach.....	130
<i>H. Lu, F. Clart-Tournier, C. Chatwin, R. Young</i>	
Secure Roaming of Key Association Scheme Providing Perfect Forward Secrecy in IEEE 802.16.....	136
<i>Y. Cui, S. Kim, K. Oh</i>	
Study of Encrypted, Non-Encrypted BitTorrent Traffic.....	142
<i>V. Rizza, H. Shi</i>	
 WIRELESS NETWORK	
Modulation Optimization of PPM Scheme in Rayleigh Channels for WSN	148
<i>Q. Tang, T. Qin</i>	
Four-Sector WiMAX Subscriber Antenna Prototypes for 2.6 GHz, 3.45 GHz.....	152
<i>P. Ritosa, T. Korosec</i>	
A Frequency, Polarization Reconfigurable Microstrip Patch Antenna for Adaptive Wireless Networks	158
<i>T. Korosec, P. Ritosa</i>	
Zigbee Enabled Radio Frequency Identification System.....	163
<i>H. Yang, F. Yao, S.-H. Yang</i>	
Fault Tolerance Magnetic Coordinate Routing for Mobile Sinks Wireless Sensor Networks (FTMC).....	169
<i>S.-H. Chang, M. Merabti, H.M. Mokhtar</i>	

Performance of Non-Binary LDPC-based Space-Time Coded OFDM Systems Over Multiple Fading Channels.....	178
<i>X.-l. Wu, J.-h. Ge, Y. Wang</i>	
Dynamic Frequency Selection for Cognitive Radios Based on Game Theory	184
<i>Z. Zhao, S. Zheng, S. Xu, J. Shang</i>	
 MULTIMEDIA COMMUNICATIONS	
Latency-Differentiable Start-Time Fair Queuing	189
<i>T.J. Kim</i>	
Research, Development of Ubiquitous School Environment.....	195
<i>M. Ogawa, T. Hirota, T. Matsuzawa</i>	
Beyond Clickers: Design, Implementation of a Wireless Intelligent Personal Electronic Response (WIPER) System	202
<i>K. Ganeshan</i>	
High-Performance Load Forecasting on Large-Scale VM-Type Thin Client System Using Data Stream Processing Technology	206
<i>K.-i. Fujiyama, K. Kida, N. Nakamura, M. Yanagisawa, T. Takemura</i>	
A Scalable Hybrid Overlay Multicast Scheme for IPTV Receivers in Subnet Dense Mode.....	213
<i>D.-K. Kim, J.-B. Kim, W.-H. Lee, K.-S. Yu</i>	
Web Mapping for Location based Decision Making	220
<i>J. Zhang, H. Shi, Y. Zhang</i>	
Image Processing Algorithms in the Polar Coordinate System Applied in the Rice Inspection	225
<i>M. Sun, S. Zhang, Y. Wei, D. An</i>	
Influence of Sampling Jitter on Matched Filtering	230
<i>L. Yin, J. Chen</i>	
Building Context into a Museum Information Guide.....	235
<i>D. Bates, N. Linge, D. Parsons, R. Holgate, P. Webb, D. Hay, S.Wynn-Jones, A. Newson, D. Ward</i>	
ICE - A Self-Organizing Infrastructure for a Flexible Service Management within Supply Chains	242
<i>D. Berg, P. Sukjit, H. Unger, J.G.M. Nicolaysen</i>	

Author Index