

IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS

A PUBLICATION OF THE IEEE COMMUNICATIONS SOCIETY AND THE SIGNAL PROCESSING SOCIETY



SEPTEMBER 2005

VOLUME 4

NUMBER 5

ITWCAX

(ISSN 1536-1276)

TRANSACTIONS LETTERS

Low-Complexity Iterative Equalization for EDGE With Bidirectional Processing	<i>X. Tang and Z. Ding</i>	1963
Wideband Adaptive Beamforming Array With Improved Radiation Characteristics	<i>S. Chandran</i>	1969
Full-Rate Full-Diversity Space-Time Code for Four-Transmit-Antenna Systems	<i>P. Luo and H. Leib</i>	1974
Joint Estimation of Carrier Offset and Code Timing for DS-CDMA With Performance Analysis	<i>K. Amleh and H. Li</i>	1980
Turbo Processing for an OFDM-Based MIMO System	<i>J. Liu and J. Li</i>	1988
Invertible Bounds for M -QAM in Rayleigh Fading	<i>A. Conti, M. Z. Win, and M. Chiani</i>	1994
Accurate Computation of Bit Error Probabilities of Band-Limited Asynchronous DS-CDMA Systems Using Higher Order Moments.	<i>J.-S. Chen</i>	2001
SLM and PTS Peak-Power Reduction of OFDM Signals Without Side Information	<i>A. D. S. Jayalath and C. Tellambura</i>	2006
The Impact of Fading Correlation on the Error Performance of MIMO Systems Over Rayleigh Fading Channels	<i>H. Liu, Y. Song, and R. C. Qiu</i>	2014
Performance of Symbol-Sampled Receivers Over Unknown Continuous-Time Rayleigh Channels	<i>R. D. Souza and J. Garcia-Frias</i>	2020
On Low-Complexity Joint-Detection Techniques for TD-CDMA	<i>N. Benvenuto, F. Boccardi, and G. Carnevale</i>	2027
Space-Time Chase Decoding	<i>D. J. Love, S. Hosur, A. Batra, and R. W. Heath, Jr.</i>	2035
The Geometry of the Capacity Region for CDMA Systems With General Power Constraints	<i>L. A. Imhof and R. Mathar</i>	2040
Space-Frequency Coding Reduces the Collision Rate in FH-OFDMA	<i>T. Kurt and H. Deliç</i>	2045
An Evolutionary Approach to Designing Complex Spreading Codes for DS-CDMA	<i>B. Natarajan, S. Das, and D. Stevens</i>	2051
Generalized Performance Analysis of a Delay Diversity Receiver in Asynchronous CDMA Channels	<i>W. Choi and J. G. Andrews</i>	2057
A Novel Prefiltering Technique for Downlink Transmissions in TDD MC-CDMA Systems	<i>M. Morelli and L. Sanguinetti</i>	2064
Transmission of Multiple Description Codes Over Wireless Channels Using Channel Balancing	<i>M. Kang and M.-S. Alouini</i>	2070
Pilot-Symbol-Assisted LDPC Coded BICM Over Correlated Rayleigh Fading Channels	<i>H. Niu and J. Ritcey</i>	2076
Optimum Pilot Pattern for Channel Estimation in OFDM Systems	<i>J.-W. Choi and Y.-H. Lee</i>	2083
Quasi-Orthogonal STBC With Minimum Decoding Complexity	<i>C. Yuen, Y. L. Guan, and T. T. Tjhung</i>	2089
Dynamic Channel Partitioning With Flexible Channel Combination for TDMA-Based Cellular Systems	<i>M. Yang and P. H. J. Chong</i>	2095

(Contents Continued on Page 1961)



TRANSACTIONS PAPERS

ICI Cancellation for OFDM Communication Systems in Time-Varying Multipath Fading Channels	<i>W.-S. Hou and B.-S. Chen</i>	2100
Statistical Properties of Loaded Wireless Multicarrier Systems	<i>C. Schurgers and M. B. Srivastava</i>	2111
Performance Limits for Filtered Multitone Modulation in Fading Channels	<i>A. M. Tonello</i>	2121
On the Complexity and Distributed Construction of Energy-Efficient Broadcast Trees in Wireless Ad Hoc Networks	<i>A. S. Ahluwalia and E. H. Modiano</i>	2136
Parallel-Interference-Cancellation-Assisted Decision-Directed Channel Estimation for OFDM Systems Using Multiple Transmit Antennas	<i>M. Münster and L. Hanzo</i>	2148
Coverage Expansion and Capacity Improvement From Soft Handoff for CDMA Cellular Systems	<i>H. Jiang and C. H. Davis</i>	2163
Performance Analysis of a Spectrally Compliant Ultra-Wideband Pulse Design	<i>K. P. Wallace, A. B. Parr, B. L. Cho, and Z. Ding</i>	2172
IEEE 802.11 Performance Enhancement via Concatenation and Piggyback Mechanisms	<i>Y. Xiao</i>	2182
The Noncoherent Rician Fading Channel—Part I: Structure of the Capacity-Achieving Input	<i>M. C. Gursoy, H. V. Poor, and S. Verdú</i>	2193
Noncoherent Rician Fading Channel—Part II: Spectral Efficiency in the Low-Power Regime	<i>M. C. Gursoy, H. V. Poor, and S. Verdú</i>	2207
Outage Capacity Improvements in Multicellular CDMA Systems Using Receive Antenna Diversity and Fast Power Control	<i>Y. Tokgoz and B. D. Rao</i>	2222
Differential Space–Time–Frequency Coded OFDM With Maximum Multipath Diversity	<i>Q. Ma, C. Tepedelenlioglu, and Z. Liu</i>	2232
Broadband Beamforming for Joint Interference Cancellation and Turbo Equalization	<i>M. Koca and B. C. Levy</i>	2244
Bit-Interleaved Space–Frequency Coded Modulation for OFDM Systems	<i>D. Rende and T. F. Wong</i>	2256
Performance Analysis of Linear Diversity-Combining Schemes on Rayleigh Fading Channels With Binary Signaling and Gaussian Weighting Errors	<i>R. Annavajjala and L. B. Milstein</i>	2267
BER of OFDM Systems Impaired by Carrier Frequency Offset in Multipath Fading Channels	<i>L. Rugini and P. Banelli</i>	2279
Optimized Delay Diversity for Frequency-Selective Fading Channels	<i>T. Hehn, R. Schober, and W. H. Gerstacker</i>	2289
IEEE 802.11 Wireless LAN Implemented on Software Defined Radio With Hybrid Programmable Architecture	<i>T. Shono, Y. Shirato, H. Shiba, K. Uehara, K. Araki, and M. Umehira</i>	2299
Design of Good Low-Rate Coding Schemes for ISI Channels Based on Spectral Shaping	<i>D. N. Doan and K. R. Narayanan</i>	2309
Performance of Cellular Networks With Relays and Centralized Scheduling	<i>H. Viswanathan and S. Mukherjee</i>	2318
Frequency-Domain Interference Cancellation and Nonlinear Equalization for CDMA Systems	<i>S. Tomasin and N. Benvenuto</i>	2329
Optimum Combining With Correlated Interference	<i>R. K. Mallik and Q. T. Zhang</i>	2340
Energy-Constrained Modulation Optimization	<i>S. Cui, A. J. Goldsmith, and A. Bahai</i>	2349
Dynamic Rate and Power Adaptation for Forward Link Transmission Using High-Order Modulation and Multicode Formats in Cellular WCDMA Networks	<i>D. I. Kim, E. Hossain, and V. K. Bhargava</i>	2361
Multidimensional Modulation for Ultra-Wideband Multiple-Access Impulse Radio in Wireless Multipath Channels	<i>X. Chu and R. D. Murch</i>	2373
Distributed Space–Time Coding for Regenerative Relay Networks	<i>G. Scutari and S. Barbarossa</i>	2387
Spatial Multiplexing Over Correlated MIMO Channels With a Closed-Form Precoder	<i>J. Akhtar and D. Gesbert</i>	2400
An Orthogonal Space–Time Coded Partial Response CPM System With Fast Decoding for Two Transmit Antennas	<i>D. Wang, G. Wang, and X.-G. Xia</i>	2410
Linear MIMO Equalization for CDMA Downlink Signals With Code Reuse	<i>L. Mailaender</i>	2423
Impact of MAI and Channel Estimation Errors on the Performance of Rake Receivers in UWB Communications	<i>A. A. D’Amico, U. Mengali, and L. Taponecco</i>	2435
Radio-Channel Characterization of an Underground Mine at 2.4 GHz	<i>C. Nerguizian, C. L. Despins, S. Affès, and M. Djadel</i>	2441

Synchronization Techniques and Guard-Band-Configuration Scheme for Single-Antenna Vector-OFDM Systems	<i>H. Zhang, X.-G. Xia, L. J. Cimini, Jr., and P. C. Ching</i>	2454
On Non-WSSUS Wireless Fading Channels	<i>G. Matz</i>	2465
Frequency-Domain Equalization for Continuous Phase Modulation	<i>J. Tan and G. L. Stüber</i>	2479
Design of Irregular Repeat Accumulate Codes for OFDM Systems With Partial Channel State Information	<i>H. Sankar and K. R. Narayanan</i>	2491
On the Amount of Fading in MIMO Diversity Systems.	<i>B. Holter and G. E. Øien</i>	2498
Channel Estimation for Adaptive Frequency-Domain Equalization.	<i>M. Morelli, L. Sanguinetti, and U. Mengali</i>	2508
Diversity and Outage Performance in Space–Time Block Coded Ricean MIMO Channels	<i>R. U. Nabar, H. Bölcskei, and A. J. Paulraj</i>	2519
Error Content in Frames Transmitted Over Burst-Error Channels	<i>K. D. R. Jagath-Kumara and M. Bebbington</i>	2533
Design of Fast-Prunable S-Random Interleavers.	<i>L. Dinoi and S. Benedetto</i>	2540
Joint Iterative Channel Estimation and Decoding for Bit-Interleaved Coded Modulation Over Correlated Fading Channels	<i>Y. Huang and J. A. Ritcey</i>	2549
Effect of Doppler Spread in OFDM-Based UWB Systems.	<i>I. R. Capoglu, Y. Li, and A. Swami</i>	2559
Capacity of Space-Time Block Codes in MIMO Rayleigh Fading Channels With Adaptive Transmission and Estimation Errors.	<i>A. Maaref and S. Aïssa</i>	2568
On Energy Provisioning and Relay Node Placement for Wireless Sensor Networks	<i>Y. T. Hou, Y. Shi, H. D. Sherali, and S. F. Midkiff</i>	2579
An Efficient Demand-Assign Medium Access Control Protocol for High-Speed Wireless Networks	<i>R. Fantacci, G. Mennuti, and T. Pecorella</i>	2591
The Exact Transition Probability and Bit Error Probability of Two-Dimensional Signaling	<i>L. Xiao and X. Dong</i>	2600

COMMENTS AND CORRECTIONS

Comments on “Optimal Resource Allocation in Multiservice CDMA Networks”	<i>S.-M. Hong</i>	2610
---	-------------------	------
