

IEEE TRANSACTIONS ON COMMUNICATIONS

A PUBLICATION OF THE IEEE COMMUNICATIONS SOCIETY



JANUARY 2016

VOLUME 64

NUMBER 1

IECMBT

(ISSN 0090-6778)

Editorial

A Message From the New Editor-in-Chief	1
--	---

Coding

Reliability-Based Joint Detection-Decoding Algorithm for Nonbinary LDPC-Coded Modulation Systems	2
..... <i>M. Zhu, Q. Guo, B. Bai, and X. Ma</i>	
Breaking the Trapping Sets in LDPC Codes: Check Node Removal and Collaborative Decoding	15
..... <i>S. Kang, J. Moon, J. Ha, and J. Shin</i>	
Construction of Near-Capacity Protograph LDPC Code Sequences With Block-Error Thresholds	27
..... <i>A. K. Pradhan, A. Thangaraj, and A. Subramanian</i>	
Bit Reliability-Based Decoders for Non-Binary LDPC Codes	38
..... <i>Q. Huang and S. Yuan</i>	
A New Class of Rateless Codes Based on Reed–Solomon Codes	49
..... <i>R. R. Borujeny and M. Ardakani</i>	
RS-LDPC Concatenated Coding for the Modern Tape Storage Channel	59
..... <i>J. Oh, J. Ha, H. Park, and J. Moon</i>	

Cognitive Radio Systems

Secure Switch-and-Stay Combining (SSSC) for Cognitive Relay Networks	70
..... <i>L. Fan, S. Zhang, T. Q. Duong, and G. K. Karagiannidis</i>	
Optimal Database Access for TV White Space	83
..... <i>M. Caleffi and A. S. Cacciapuoti</i>	
Incumbent and LSA Licensee Classification Through Distributed Cognitive Networks	94
..... <i>I. Sobron, W. A. Martins, M. L. R. de Campos, and M. Velez</i>	
Permutation Trellis Coded Multi-Level FSK Signaling to Mitigate Primary User Interference in Cognitive Radio Networks	104
..... <i>R. El-Bardan, E. Masazade, O. Ozdemir, Y. S. Han, and P. K. Varshney</i>	

Cooperative/Relay Systems

Effective Capacity of Buffer-Aided Full-Duplex Relay Systems With Selection Relaying	117
..... <i>D. Qiao</i>	
Optimal Relay Configuration for Power Line Communication Networks	130
..... <i>I. Rubin, Y.-Y. Lin, and D. Kofman</i>	
Full-Duplex Decode-and-Forward Relay-Assisted Interference Management: A Diversity Gain Region Perspective	141
..... <i>R. P. Sirigina and A. S. Madhukumar</i>	

Fading/Equalization

On the Distribution of Indefinite Quadratic Forms in Gaussian Random Variables	153
..... <i>T. Y. Al-Naffouri, M. Moinuddin, N. Ajeeb, B. Hassibi, and A. L. Moustakas</i>	

Information Theory

On the Finiteness of the Capacity of Continuous Channels	166
..... <i>J. Fahs and I. Abou-Faycal</i>	

MIMO

Omnidirectional Precoding Based Transmission in Massive MIMO Systems	174
..... <i>X. Meng, X. Gao, and X.-G. Xia</i>	

(Contents Continued on Back Cover)



Training Sequence Design for Feedback Assisted Hybrid Beamforming in Massive MIMO Systems	S. Noh, M. D. Zoltowski, and D. J. Love	187
Hybrid Block Diagonalization for Massive Multiuser MIMO Systems	W. Ni and X. Dong	201
Power Allocation for Distributed Antenna Systems in Frequency-Selective Fading Channels	Q.-Y. Yu, Y.-T. Li, W. Xiang, W.-X. Meng, and W.-Y. Tang	212
<i>Modulation/Detection</i>		
ML Detection in Phase Noise Impaired SIMO Channels With Uplink Training	A. Pitarokilis, E. Björnson, and E. G. Larsson	223
Adaptive Transmission Rate With a Fixed Threshold Decoder for Diffusion-Based Molecular Communication	M. Movahednasab, M. Soleimanifar, A. Gohari, M. Nasiri-Kenari, and U. Mitra	236
Design and Performance Analysis of a Multiuser OFDM Based Differential Chaos Shift Keying Communication System	G. Kaddoum	249
Performance Analysis for OFDM Signals With Peak Cancellation	J. Song and H. Ochiai	261
Block-Sparse Impulsive Noise Reduction in OFDM Systems—A Novel Iterative Bayesian Approach	M. Korki, J. Zhang, C. Zhang, and H. Zayyani	271
<i>Network Coding</i>		
Analysis and Optimization of Sparse Random Linear Network Coding for Reliable Multicast Services	A. Tassi, I. Chatzigeorgiou, and D. E. Lucani	285
<i>Networks</i>		
Stability, Rate, and Delay Analysis of Single Bottleneck Caching Networks	F. Rezaei and B. H. Khalaj	300
<i>Physical-layer Security</i>		
Physical Layer Security for Multiple-Antenna Systems: A Unified Approach	K. P. Peppas, N. C. Sagias, and A. Maras	314
Secure D2D Communication in Large-Scale Cognitive Cellular Networks: A Wireless Power Transfer Model	Y. Liu, L. Wang, S. A. Raza Zaidi, M. Elkashlan, and T. Q. Duong	329
<i>Source-Channel Coding</i>		
A Lower Bound Analysis of Hamming Distortion for a Binary CEO Problem With Joint Source-Channel Coding	X. He, X. Zhou, P. Komulainen, M. Juntti, and T. Matsumoto	343
Transmission of Sporadic Analog Samples Over Wireless Channels	A. Ünsal and R. Knopp	354
<i>Spread Spectrum</i>		
A Systematic Method for Constructing Sparse Gaussian Integer Sequences With Ideal Periodic Autocorrelation Functions	S.-H. Wang, C.-P. Li, H.-H. Chang, and C.-D. Lee	365
<i>Synchronization</i>		
A Sparse Recovery Method for Initial Uplink Synchronization in OFDMA Systems	M. M. Hyder and K. Mahata	377
Message Passing Algorithms for Phase Noise Tracking Using Tikhonov Mixtures	S. Shayovitz and D. Raphaeli	387
<i>Wireless Communications</i>		
Cooperative Base Station Coloring for Pair-Wise Multi-Cell Coordination	J. Park, N. Lee, and R. W. Heath Jr.	402
Throughput Analysis of Hybrid-ARQ—A Matrix Exponential Distribution Approach	P. Larsson, L. K. Rasmussen, and M. Skoglund	416
Linearly Constrained Bimatrix Games in Wireless Communications	K. Firouzbakht, G. Noubir, and M. Salehi	429
