

IEEE TRANSACTIONS ON COMMUNICATIONS

A PUBLICATION OF THE IEEE COMMUNICATIONS SOCIETY



JUNE 2020

VOLUME 68

NUMBER 6

IECMBT

(ISSN 0090-6778)

<i>Coded Caching/Computing</i>	
Rate-Memory Trade-off for Multi-Access Coded Caching With Uncoded Placement	3261
..... K. S. Reddy and N. Karamchandani	
Mobility-Aware Coded Storage and Delivery	3275
..... E. Ozfatura and D. Gündüz	
<i>Coding</i>	
Velocity Analysis of BP Decoding Waves for SC-LDPC Ensembles on BMS Channels: An Interpolation-Based Approach	3286
..... Z. Zhang, K. Zhang, Z. Peng, D. Zeng, and M. Dai	
Optimal Cyclic Codes With Hierarchical Locality	3302
..... G. Luo and X. Cao	
<i>Cognitive Radio Systems</i>	
Transmit Power Policy and Ergodic Multicast Rate Analysis of Cognitive Radio Networks in Generalized Fading ...	
..... A. Subhash, M. Srinivasan, S. Kalyani, and L. Hanzo	3311
<i>Cooperative/Relay Systems</i>	
Finite Blocklength Non-Orthogonal Cooperative Communication Relying on SWIPT-Enabled Energy Harvesting Relays	3326
..... A. Agarwal, A. K. Jagannatham, and L. Hanzo	
Cloud-Driven Multi-Way Multiple-Antenna Relay Systems: Joint Detection, Best-User-Link Selection and Analysis	3342
..... F. L. Duarte and R. C. de Lamare	
Dynamic Socially-Motivated D2D Relay Selection With Uniform QoE Criterion for Multi-Demands	3355
..... M. Wu, Y. Xiao, Y. Gao, and M. Xiao	
<i>Data Compression</i>	
Design of General Entropy-Constrained Successively Refinable Unrestricted Polar Quantizer	3369
..... H. Wu and S. Dumitrescu	
<i>Information Theory</i>	
The Capacity and Optimal Signaling for Gaussian MIMO Channels Under Interference Constraints	3386
..... S. Loyka	
Fundamental Limits of Covert Packet Insertion	3401
..... R. Soltani, D. Goeckel, D. Towsley, and A. Houmansadr	
Towards Practical Private Information Retrieval From MDS Array Codes	3415
..... J. Li, D. Karpuk, and C. Hollanti	
<i>Machine Learning and Communications</i>	
A Deep Reinforcement Learning-Based Transcoder Selection Framework for Blockchain-Enabled Wireless D2D Transcoding	3426
..... M. Liu, Y. Teng, F. R. Yu, V. C. M. Leung, and M. Song	

(Contents Continued on Page 3259)



Autoencoder-Based Error Correction Coding for One-Bit Quantization	<i>E. Balevi and J. G. Andrews</i>	3440
Robust Federated Learning With Noisy Communication	<i>F. Ang, L. Chen, N. Zhao, Y. Chen, W. Wang, and F. R. Yu</i>	3452
<i>MIMO</i>		
Message Passing-Based Link Configuration in Short Range Millimeter Wave Systems	<i>N. Jonathan Myers, J. Kaleva, A. Tölli, and R. W. Heath, Jr.</i>	3465
Rate Analysis of Cell-Free Massive MIMO-NOMA With Three Linear Precoders	<i>F. Rezaei, C. Tellambura, A. A. Tadaion, and A. R. Heidarpour</i>	3480
Jamming-Robust Uplink Transmission for Spatially Correlated Massive MIMO Systems	<i>H. Akhlaghpasand, E. Björnson, and S. M. Razavizadeh</i>	3495
Block-Based Spatial Modulation: Constellation Design and Low-Complexity Detection	<i>S. Gadhai and R. Budhiraja</i>	3505
Energy-Efficient Hybrid Precoding for Massive MIMO mmWave Systems With a Fully-Adaptive-Connected Structure	<i>X. Xue, Y. Wang, L. Yang, J. Shi, and Z. Li</i>	3521
Pilot Sequence Design for Mitigating Pilot Contamination With Reduced RF Chains	<i>S. Stein Ioushua and Y. C. Eldar</i>	3536
<i>Molecular Communications</i>		
Two-Way Molecular Communications	<i>J. W. Kwak, H. B. Yilmaz, N. Farsad, C.-B. Chae, and A. J. Goldsmith</i>	3550
<i>Multiple Access</i>		
A Generalized Construction of Multiple Complete Complementary Codes and Asymptotically Optimal Aperiodic Quasi-Complementary Sequence Sets	<i>Z. Zhou, F. Liu, A. R. Adhikary, and P. Fan</i>	3564
Outage Probability Analysis for the Multi-Carrier NOMA Downlink Relying on Statistical CSI	<i>S. Li, M. Derakhshani, S. Lambotharan, and L. Hanzo</i>	3572
Optimal Designs for Relay-Assisted NOMA Networks With Hybrid SWIPT Scheme	<i>G. Li, D. Mishra, Y. Hu, and S. Atapattu</i>	3588
<i>Network Coding</i>		
Optimization of Two-Way Network Coded HARQ With Overhead	<i>H. Zhu, B. Smida, and D. J. Love</i>	3602
<i>Networks</i>		
Meta Distribution of the SIR in Moving Networks	<i>X. Tang, X. Xu, and M. Haenggi</i>	3614
A Reinforcement Learning-Based User-Assisted Caching Strategy for Dynamic Content Library in Small Cell Networks	<i>X. Zhang, G. Zheng, S. Lambotharan, M. R. Nakhai, and K.-K. Wong</i>	3627
Learn to Compress CSI and Allocate Resources in Vehicular Networks	<i>L. Wang, H. Ye, L. Liang, and G. Y. Li</i>	3640
OODT: Obstacle Aware Opportunistic Data Transmission for Cognitive Radio Ad Hoc Networks	<i>X. Zhong, L. Li, Y. Zhang, B. Zhang, W. Zhang, and T. Yang</i>	3654
Learning Automata Based Q-Learning for Content Placement in Cooperative Caching	<i>Z. Yang, Y. Liu, Y. Chen, and L. Jiao</i>	3667
<i>Optical Communication</i>		
On the Effect of Interference and Misalignment Error in Mixed RF/FSO Systems Over Generalized Fading Channels	<i>A. Upadhy, V. K. Dwivedi, and G. K. Karagiannidis</i>	3681
Performance Analysis of Unequal-Mark-Power Optical CDMA Systems	<i>A. Ghorban Sabbagh and F. Zare Miandehi</i>	3696
Generalized Time Slot Index Modulation for Optical Wireless Communications	<i>A. A. Purwita, A. Yesilkaya, M. Safari, and H. Haas</i>	3706
Statistical Modeling of the FSO Fronthaul Channel for UAV-Based Communications	<i>M. Najafi, H. Ajam, V. Jamali, P. D. Diamantoulakis, G. K. Karagiannidis, and R. Schober</i>	3720
<i>Physical Layer Security</i>		
Covert Communication and Secure Transmission Over Untrusted Relaying Networks in the Presence of Multiple Wardens	<i>M. Forouzes, P. Azmi, A. Kuhestani, and P. L. Yeoh</i>	3737
<i>Resource Allocation</i>		
Joint Allocation Strategies of Power and Spreading Factors With Imperfect Orthogonality in LoRa Networks	<i>L. Amichi, M. Kaneko, E. H. Fukuda, N. El Rachkidy, and A. Guitton</i>	3750
Energy-Efficient Resource Allocation for NOMA Based Small Cell Networks With Wireless Backhauls	<i>A. J. Muhammed, Z. Ma, Z. Zhang, P. Fan, and E. G. Larsson</i>	3766

<i>Source-Channel Coding</i>	
Generalized Gaussian Multiterminal Source Coding in the High-Resolution Regime	L. Xie, X. Tu, S. Zhou, and J. Chen 3782
User Preference Aware Lossless Data Compression at the Edge	Y. Lu, W. Chen, and H. V. Poor 3792
<i>Transmission Systems</i>	
When Entanglement Meets Classical Communications: Quantum Teleportation for the Quantum Internet (Invited Paper)	A. S. Cacciapuoti, M. Caleffi, R. Van Meter, and L. Hanzo 3808
<i>Wireless Communications</i>	
Joint Radar and Communication Design: Applications, State-of-the-Art, and the Road Ahead (Invited Paper)	F. Liu, C. Masouros, A. P. Petropulu, H. Griffiths, and L. Hanzo 3834
Energy Efficient Beamforming Schemes for Satellite-Aerial-Terrestrial Networks	Q. Huang, M. Lin, J.-B. Wang, T. A. Tsiftsis, and J. Wang 3863
Energy-Efficient Transceiver Design for Cache-Enabled Millimeter-Wave Systems	S. He, J. Wang, W. Huang, Y. Huang, M. Xiao, and Y. Zhang 3876
Polarization Modulation Design for Reduced RF Chain Wireless	I. A. Hemadeh, P. Xiao, Y. Kabiri, L. Xiao, V. Fusco, and R. Tafazolli 3890
Off-Grid Aware Channel and Covariance Estimation in mmWave Networks	C. K. Anjinappa, A. C. Gürbüz, Y. Yapıcı, and İ. Güvenç 3908
Improper Gaussian Signaling for Integrated Data and Energy Networking	H. Yu, H. D. Tuan, T. Q. Duong, Y. Fang, and L. Hanzo 3922
