

IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS

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



APRIL 2021

VOLUME 20

NUMBER 4

ITWCAX

(ISSN 1536-1276)

REGULAR PAPERS

Wideband Channel Tracking and Hybrid Precoding for mmWave MIMO Systems	2161
..... <i>Nuria González-Prelcic, Hongxiang Xie, Joan Palacios, and Takayuki Shimizu</i>	
Pricing-Based Channel Selection for D2D Content Sharing in Dynamic Environments	2175
..... <i>Lianxin Yang, Dan Wu, Chao Yue, Yu Zhang, and Yan Wu</i>	
Network-Assisted Full-Duplex Distributed Massive MIMO Systems With Beamforming Training Based CSI Estimation	2190
..... <i>Jiamin Li, Qian Lv, Pengcheng Zhu, Dongming Wang, Jiangzhou Wang, and Xiaohu You</i>	
Full-Duplexing With SDR Devices: Algorithms, FPGA Implementation, and Real-Time Results	2205
..... <i>Lauri Anttila, Vesa Lampu, Seyed Ali Hassani, Pablo Pascual Campo, Dani Korpi, Matias Turunen, Sofie Pollin, and Mikko Valkama</i>	
Cooperative Multi-Point Vehicular Positioning Using Millimeter-Wave Surface Reflection	2221
..... <i>Zezhong Zhang, Seung-Woo Ko, Rui Wang, and Kaibin Huang</i>	
A Dynamic 3-D Wideband GBSM for Cooperative Massive MIMO Channels in Intelligent High-Speed Railway Communication Systems	2237
..... <i>Tao Zhou, Yi Yang, Liu Liu, Cheng Tao, and Yiqun Liang</i>	
An Optimal Deployment Framework for Multi-Cloud Virtualized Radio Access Networks	2251
..... <i>Fahri Wisnu Murti, Jose A. Ayala-Romero, Andres Garcia-Saavedra, Xavier Costa-Pérez, and George Iosifidis</i>	
Hierarchical Broadcast Coding: Expediting Distributed Learning at the Wireless Edge	2266
..... <i>Dong-Jun Han, Jy-Yong Sohn, and Jaekyun Moon</i>	
Graph Embedding-Based Wireless Link Scheduling With Few Training Samples	2282
..... <i>Mengyuan Lee, Guanding Yu, and Geoffrey Ye Li</i>	
A Partial Gaussian Tree Approximation (PGTA) Detector for Random Multiple Access Oriented SCMA Uplink With Codebook Collisions	2295
..... <i>Qiwei Wang and Guangliang Ren</i>	
Deep Learning for Radio Resource Allocation With Diverse Quality-of-Service Requirements in 5G	2309
..... <i>Rui Dong, Changyang She, Wibowo Hardjawana, Yonghui Li, and Branka Vucetic</i>	
Robust Secrecy Competition With Aggregate Interference Constraint in Small-Cell Networks	2325
..... <i>Xiao Tang, Ruonan Zhang, Wei Wang, Lin Cai, and Zhu Han</i>	

(Contents Continued on Back Cover)



Channel Resource Scheduling for Stringent Demand of Emergency Data Transmission in WBANs	2341
..... <i>Baowen Liang, Xuxun Liu, Huan Zhou, Victor C. M. Leung, Anfeng Liu, and Kaikai Chi</i>	
Characteristic Mode Analysis of ESPAR for Single-RF MIMO Systems	2353
..... <i>Zixiang Han, Yujie Zhang, Shanpu Shen, Yue Li, Chi-Yuk Chiu, and Ross Murch</i>	
UAV-Aided Data Collection for Information Freshness in Wireless Sensor Networks	2368
..... <i>Juan Liu, Peng Tong, Xijun Wang, Bo Bai, and Huaiyu Dai</i>	
Performance, Fairness, and Tradeoff in UAV Swarm Underlaid mmWave Cellular Networks With Directional Antennas	2383
..... <i>Bin Yang, Tarik Taleb, Yulong Shen, Xiaohong Jiang, and Weidong Yang</i>	
Deep Learning for Channel Estimation: Interpretation, Performance, and Comparison	2398
..... <i>Qiang Hu, Feifei Gao, Hao Zhang, Shi Jin, and Geoffrey Ye Li</i>	
Scaling Laws for Age of Information in Wireless Networks	2413
..... <i>Baturalp Buyukates, Alkan Soysal, and Sennur Ulukus</i>	
Distributed User Association in B5G Networks Using Early Acceptance Matching Game	2428
..... <i>Alireza Alizadeh and Mai Vu</i>	
Joint Beamwidth and Power Optimization in MmWave Hybrid Beamforming-NOMA Systems	2442
..... <i>Mojtaba Ahmadi Almasi, Lisi Jiang, Hamid Jafarkhani, and Hani Mehrpouyan</i>	
Convergence Time Optimization for Federated Learning Over Wireless Networks	2457
..... <i>Mingzhe Chen, H. Vincent Poor, Walid Saad, and Shuguang Cui</i>	
Optimizing IoT Energy Efficiency on Edge (EEE): A Cross-Layer Design in a Cognitive Mesh Network	2472
..... <i>Jianqing Liu, Yawei Pang, Haichuan Ding, Ying Cai, Haixia Zhang, and Yuguang Fang</i>	
Robust Transmission Design for Intelligent Reflecting Surface-Aided Secure Communication Systems With Imperfect Cascaded CSI	2487
..... <i>Sheng Hong, Cunhua Pan, Hong Ren, Kezhi Wang, Kok Keong Chai, and Arumugam Nallanathan</i>	
A Gated Service MAC Protocol for Sub-Ms Latency 5G Fiber-Wireless mmWave C-RANs	2502
..... <i>Agapi Mesodiakaki, Pavlos Maniotis, Marios Gatzianas, Christos Vagionas, Nikos Pleros, and George Kalfas</i>	
MIMO Full-Duplex Networks With Limited Knowledge of the Relay State	2516
..... <i>Alessandro Nordio and Carla Fabiana Chiasserini</i>	
Sum-Rate Maximization for IRS-Assisted UAV OFDMA Communication Systems	2530
..... <i>Zhiqiang Wei, Yuanxin Cai, Zhuo Sun, Derrick Wing Kwan Ng, Jinhong Yuan, Mingyu Zhou, and Lixin Sun</i>	
Deep Reinforcement Learning for Multi-Agent Power Control in Heterogeneous Networks	2551
..... <i>Lin Zhang and Ying-Chang Liang</i>	
Distributed Multi-Cloud Multi-Access Edge Computing by Multi-Agent Reinforcement Learning	2565
..... <i>Yutong Zhang, Boya Di, Zijie Zheng, Jinlong Lin, and Lingyang Song</i>	
Exploiting Correlation With Wideband CQI and Making Differential Feedback Overhead Flexible in 4G/5G OFDM Systems	2579
..... <i>Vineeth Kumar and Neelesh B. Mehta</i>	
Energy Efficient Robust Beamforming and Cooperative Jamming Design for IRS-Assisted MISO Networks	2592
..... <i>Qun Wang, Fuhui Zhou, Rose Qingyang Hu, and Yi Qian</i>	
Scalar Ambiguity Estimation Based on Maximum Likelihood Criteria for Totally Blind Channel Estimation in Block Transmission Systems	2608
..... <i>Norisato Suga and Toshihiro Furukawa</i>	
Distributed Deep Convolutional Compression for Massive MIMO CSI Feedback	2621
..... <i>Mahdi Boloursaz Mashhadi, Qianqian Yang, and Deniz Gündüz</i>	
Cooperative Interference Management for Over-the-Air Computation Networks	2634
..... <i>Xiaowen Cao, Guangxu Zhu, Jie Xu, and Kaibin Huang</i>	
High Order PSK Modulation in Massive MIMO Systems With 1-Bit ADCs	2652
..... <i>Bule Sun, Yiqing Zhou, Jinhong Yuan, Ya-Feng Liu, Lu Wang, and Ling Liu</i>	
Two-Dimensional Channel Parameter Estimation for Millimeter-Wave Systems Using Butler Matrices	2670
..... <i>Fazal-E-Asim, Felix Antreich, Charles C. Cavalcante, André L. F. de Almeida, and Josef A. Nossek</i>	
Probabilistic Caching and Dynamic Delivery Policies for Categorized Contents and Consecutive User Demands	2685
..... <i>Minseok Choi, Andreas F. Molisch, Dong-Jun Han, Dongjae Kim, Joongheon Kim, and Jaekyun Moon</i>	
Geometry-Based MPC Tracking and Modeling Algorithm for Time-Varying UAV Channels	2700
..... <i>José Rodríguez-Piñero, Zeyu Huang, Xuesong Cai, Tomás Domínguez-Bolaño, and Xuefeng Yin</i>	
Tracking System for Fast Moving Nodes in Optical Mobile Communication and the Design Rules	2716
..... <i>Kehan Zhang, Bingcheng Zhu, Zaichen Zhang, and Haibo Wang</i>	
Low-Complexity Soft-Output MIMO Detectors Based on Optimal Channel Puncturing	2729
..... <i>Mohammad M. Mansour</i>	
Accurate Semidefinite Relaxation Method for Elliptic Localization With Unknown Transmitter Position	2746
..... <i>Ruichao Zheng, Gang Wang, and K. C. Ho</i>	
