2018 Wireless Telecommunications Symposium (WTS 2018)

Phoenix, Arizona, USA 17-20 April 2018



IEEE Catalog Number: ISBN:

CFP18WTS-POD 978-1-5386-3396-0

Copyright © 2018 by the Institute of Electrical and Electronics Engineers, Inc. All Rights Reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number:	CFP18WTS-POD
ISBN (Print-On-Demand):	978-1-5386-3396-0
ISBN (Online):	978-1-5386-3395-3
ISSN:	1934-5070

1934-5070

Additional Copies of This Publication Are Available From:

Curran Associates, Inc 57 Morehouse Lane Red Hook, NY 12571 USA Phone: (845) 758-0400 Fax: (845) 758-2633 E-mail: curran@proceedings.com Web: www.proceedings.com



Table of Contents

Modified CS-based Downlink Channel Estimation with Temporal Correlation in FDD Massive MIMO Systems 1

Device-to-Device Communications in the millimeter Wave Band: A Novel Distributed Mechanism 8

Modeling Millimeter Wave Tropospheric Attenuations for UAS and Terrestrial Aviation Communications 14

31 GHz Path Loss Measurement and Modeling for Indoor/Outdoor Environments 23

An Efficient Wireless Access Point Selection Algorithm for Location Determination Based on RSSI Interval Overlap Degree Determination 31

Autoencoder-based Network Anomaly Detection 39

Pareto Optimization for Uplink NOMA Power Control 44

Cooperative New Flow Handling Scheme for Wireless Multi-hop Software Defined Networks 49

Automated Oscillation Detection and Correction of Fused Wearable Sensor Signals using Machine Learning 55

Detecting Traffic Anomaly in Wireless Networks, An Analytics Methodology 61

Near-Instant Link Failure Recovery in 5G Wireless Fog-Based-Fronthaul Networks 67

Theoretical Performance Evaluation of System Capacity in Multi-user MIMO THP with Ordering 73

User Throughput-Based Quality of Experience 79

Automated Class-based Compression for Real-Time Epileptic Seizure Detection 85

Personalized Recommendation for Weibo Comic Users 91

Predictive Self-Learning Content Recommendation System for Multimedia Contents 97

Secure Multi-protocol Gateway for Internet of Things 103

A Highly Accurate Machine Learning Approach for Developing Wireless Sensor Network Middleware 111

On Improving Imputation Accuracy of LTE Spectrum Measurements Data 118

SAGE Algorithm Based MAP Channel Estimation for Multi-Cell Massive MIMO Systems 125

Adjustment of Firing Phase Changing Probability in Extended-Desync TDMA 130

A Software-Defined Networking framework for IoT based on 6LoWPAN 135

A New Routing Protocol for UAV Relayed Tactical Mobile Ad Hoc Networks 142

Measurement-based characterization of the 3.5 GHz channel for 5G-enabled IoT at complex industrial and office topologies 146

Channel Access Mechanisms for Video Streaming over LTE-Unlicensed 155

Energy Efficient Sensor Selection Method in Cooperative Spectrum Sensing with Low-Complexity 162

A VHO Scheme for Supporting Healthcare Services in 5G Vehicular Cloud Computing Systems 168 Simulation-based Optimization for Reconfiguration of Mobile Wireless Sensor Network 174