

2018 IEEE 10th Latin-American Conference on Communications (LATINCOM 2018)

**Guadalajara, Jalisco, Mexico
14 – 16 November 2018**



**IEEE Catalog Number: CFP1807H-POD
ISBN: 978-1-5386-6755-2**

**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:	CFP1807H-POD
ISBN (Print-On-Demand):	978-1-5386-6755-2
ISBN (Online):	978-1-5386-6754-5
ISSN:	2330-989X

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

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

CPW-OFDM(CYCLIC POSTFIX WINDOWING OFDM) FOR THE B5G (BEYOND 5TH GENERATION) WAVEFORM	1
<i>C. An, H. Ryu</i>	
PROTOTYPING PLATFORM FOR THE DEVELOPMENT OF PROOF-OF-CONCEPT OF DIGITAL SIGNAL PROCESSING ALGORITHMS	5
<i>R. Acosta-Quinonez, D. Torres-Roman, R. Rodriguez-Avila</i>	
USING SFP DATA TO DETECT CONTAMINATED FIBER CONNECTORS	11
<i>C. Mendoza, V. Dasari, M. McGarry</i>	
INFRASTRUCTURE COSTS IN DYNAMIC OPTICAL NETWORKS	17
<i>R. Reyes, O. Ali, T. Bauschert</i>	
EXPLOITING MULTI-USER DETECTION (MUD) RADIO CAPABILITIES TO IMPROVE STABILITY OF CSMA/CA FOR MANETS	23
<i>C. Santivanez</i>	
OPTIMAL FORMULATION FOR MAXIMIZING AREA COVERAGE IN WIRELESS SENSOR NETWORKS WITH MOBILE NODES.....	29
<i>C. Zygowski, A. Jaekel</i>	
PERFORMANCE OF QOS POLICIES IN SOFTWARE-DEFINED NETWORKS.....	35
<i>J. Manzanares, A. Cruz, J. Molina</i>	
PREDICTIVE TOOL FOR PLANNING THE SCALING AND INTERFERENCE OF WIRELESS SENSOR NETWORKS.....	41
<i>J. Rodriguez, C. Del-Valle-Soto</i>	
SAWOA: SELF-ADAPTIVE WHALE OPTIMIZATION ALGORITHM FOR NOTCH FILTER DESIGN IN UWB ANTENNA APPLICATIONS.....	47
<i>D. Poveda-Pulla, J. Benavides-Aucapina, R. Lituma-Guartan, L. Guerrero-Vasquez, A. Chasi-Pesantez</i>	
PERFORMANCE OF DSR ALGORITHM IN VANETS.....	53
<i>E. Pereira, E. Leonardo</i>	
OFDM CHANNEL ESTIMATION USING VANDERMONDE MATRIX AND FREQUENCY DOMAIN CORRELATION	59
<i>C. Vargas-Rosales, R. Villalpando-Hernandez, J. Cuan</i>	
ALTERNATIVE VITERBI DETECTION METRICS FOR GFSK RECEIVERS: A HARDWARE REDUCTION APPROACH	64
<i>J. Valencia-Velasco, R. Aldana-Lopez, O. Longoria-Gandara</i>	
A NOVEL HYBRID FRACTAL ANTENNA DESIGN FOR ULTRA-WIDEBAND APPLICATION	69
<i>R. Lituma-Guartan, J. Benavides-Aucapina, D. Poveda-Pulla, L. Guerrero-Vasquez, P. Chasi-Pesantez</i>	
SACPDE: SELF-ADAPTIVE CONTROL PARAMETERS IN DIFFERENTIAL EVOLUTION ALGORITHM FOR NOTCH FILTER DESIGN IN UWB ANTENNA APPLICATIONS.....	74
<i>D. Poveda-Pulla, J. Benavides-Aucapina, R. Lituma-Guartan, L. Guerrero-Vasquez, P. Chasi-Pesantez</i>	
AN IMPROVED ENVELOPE TRACKING SOA AMPLIFIER FOR CO-OFDM TRANSMISSION BY USING PSO	80
<i>J. Ortiz-Cornejo, S. Azou, J. Pardinias-Mir, P. Morel</i>	
ANALYTICAL SPECTRAL EVALUATION OF GFDM SYSTEMS OVER NON-LINEAR CHANNELS WITH MEMORY	85
<i>A. Hilario-Tacuri, J. Fortes, R. Sampaio-Neto</i>	
A FRAMEWORK FOR THE PARALLELIZATION OF OPTICAL COMMUNICATION ALGORITHMS ON SOC-FPGA USING HLS.....	90
<i>D. Marquez-Viloria, N. Guerrero-Gonzalez, C. Alzate-Anzola</i>	
A NORMAL PROBABILITY MODEL FOR ESTIMATING MAXIMUM THROUGHPUT OF A TRANSPORT LINK BASED ON EXPERIMENTAL 4G BASE STATION DATA ANALYSIS.....	96
<i>R. Cerna, M. Garcia, J. Patino</i>	
CLUBBT: LEVERAGING BITTORRENT FOR CONTENT DISTRIBUTION IN AD-HOC SOCIAL NETWORKS.....	101
<i>E. Marquez-Solis, E. Perez-Cortes, M. Lopez-Guerrero, A. Medrano-Chavez</i>	
METAHEURISTIC OPTIMIZATION ALGORITHMS OF SWARM INTELLIGENCE IN PATCH ANTENNA DESIGN	107
<i>P. Guaman, L. Guerrero-Vasquez, J. Bermeo, P. Chasi</i>	

SELF-COMPLEMENTARY ANTENNA WITH MULTI-RESONANCE FREQUENCY BASED ON FIBONACCI SEQUENCE FOR UWB APPLICATIONS	113
<i>J. Benavides-Aucapina, R. Lituma-Guartan, D. Poveda-Pulla, L. Guerrero-Vasquez, P. Chasi-Pesantez</i>	
PERFORMANCE ANALYSIS OF THE CIRCULAR FOLDING COOPERATIVE POWER SPECTRAL DENSITY SPLIT CANCELLATION ALGORITHM FOR SPECTRUM SENSING UNDER ERRORS AT THE QUANTIZED REPORT CHANNEL.....	118
<i>E. Almeida, L. Costa, R. Souza, D. Guimaraes</i>	
QOS PROPOSAL FOR IEC 61850 TRAFFIC UNDER AN SDN ENVIRONMENT	124
<i>A. Leal, J. Botero, E. Jacob</i>	
A REVIEW OF INDOOR CHANNEL MODELING TECHNIQUES FOR VISIBLE LIGHT COMMUNICATIONS	130
<i>A. Ramirez-Aguilera, J. Luna-Rivera, V. Guerra, J. Rabadan, R. Perez-Jimenez, F. Lopez-Hernandez</i>	
ESTIMATION OF THE VELOCITY OF A WALKING PERSON IN NON-STATIONARY INDOOR ENVIRONMENTS FROM THE RECEIVED RF SIGNAL.....	136
<i>R. Hicheri, M. Patzold, N. Youssef</i>	
IEEE-754 HALF-PRECISION FLOATING-POINT LOW-LATENCY RECIPROCAL SQUARE ROOT IP-CORE.....	142
<i>C. Aguilera-Galicia, O. Longoria-Gandara, O. Guzman-Ramos, L. Pizano-Escalante, J. Vazquez-Castillo</i>	
SYMMETRICAL TO ASYMMETRICAL MODEL TRANSFORMATION FOR I/Q IMBALANCE IN ZERO-IF TRANSCEIVERS	148
<i>M. Borja-Benitez, R. Parra-Michel, A. Orozco-Lugo</i>	
PERFORMANCE OF MULTIPLE-SITE DIVERSITY AND ITS RELATIONSHIP WITH TIME DIVERSITY IN TROPICAL REGIONS.....	154
<i>K. Salazar, B. Ramos, J. Brito, M. D'Amico</i>	
MULTIPLE INDEPENDENT INTERFERENCES CANCELLATION FOR SC-FDE SYSTEMS USING WIDELY LINEAR ITERATIVE EQUALIZERS.....	159
<i>R. Pereira, C. Rocha, B. Chang</i>	
OPTIMAL SPARSE CHANNEL ESTIMATION FOR UNKNOWN SPARSE LEVEL IN WIRELESS OFDM SYSTEMS	165
<i>J. Vera-Gonzalez, A. Prieto-Guerrero, M. Ghogho, D. Bonilla-Licea</i>	
A COMPARATIVE ANALYSIS OF DSRC AND VLC FOR VIDEO DISSEMINATION IN PLATOON OF VEHICLES	170
<i>W. Lobato, J. Costa, D. Rosario, E. Cerqueira, L. Villas</i>	
APPROXIMATE ANTENNA RADIATION PATTERN DETERMINATION USING A LOW COST MEASURING SYSTEM AT 2.4 GHZ	176
<i>F. Rea, N. Tovar, M. Barba, J. Aviles</i>	
6GENESIS FLAGSHIP PROGRAM: BUILDING THE BRIDGES TOWARDS 6G-ENABLED WIRELESS SMART SOCIETY AND ECOSYSTEM.....	181
<i>M. Katz, M. Matinmikko-Blue, M. Latva-Aho</i>	
PERFORMANCE EVALUATION OF TURBO DECODING IN DFTS-OFDM SYSTEMS OVER V2V CHANNEL	187
<i>J. Puerto-Flores, L. Yllescas, R. Parra-Michel, F. Pena-Campos, J. Cortez</i>	
5G V2X ECOSYSTEM PROVIDING ENTERTAINMENT ON BOARD USING MMWAVE COMMUNICATIONS	192
<i>C. Storck, F. Duarte-Figueiredo</i>	
PEL DECIMATION ARCHITECTURE FOR MOTION DETECTION ON PREDICTIVE VIDEO CODING.....	198
<i>J. Ruiz-Hernandez, J. Tecpanecatl-Xihuitl, R. Aguilar-Ponce</i>	
OPTIMAL DESIGN OF AN AXIALLY DISPLACED ELLIPSE ANTENNA	204
<i>M. Tipan, G. Arevalo, B. Iraguen</i>	
AN IN-DEPTH ANALYSIS OF THE LAST TWENTY YEARS ABOUT IPV6 SECURITY.....	209
<i>L. Almeida, P. Carvalho, C. Jacome, M. Monteiro, M. Cabral</i>	
UNIFIED JOINT SYMBOL AND CHANNEL ESTIMATION WITH INTERFERENCE SUBTRACTION FOR ONE-WAY AND TWO-WAY MIMO RELAYING SYSTEMS	215
<i>L. Ximenes</i>	
PRACH POWER CONTROL MECHANISM FOR IMPROVING RANDOM-ACCESS ENERGY EFFICIENCY IN LONG TERM EVOLUTION	221
<i>F. Pereira, C. Astudillo, T. Andrade, N. Fonseca</i>	
HALF-PRECISION FLOATING-POINT MULTIPLIER IP CORE BASED ON 130 NM CMOS ASIC TECHNOLOGY.....	227
<i>C. Aguilera-Galicia, O. Longoria-Gandara, L. Pizano-Escalante</i>	

SPECTRUM OCCUPANCY MEASUREMENTS IN THE SUB-6 GHZ BAND FOR SMART SPECTRUM APPLICATIONS	232
<i>D. Ramirez, M. Cardenas-Juarez, U. Pineda-Rico, A. Arce, E. Stevens-Navarro</i>	
AN ENERGY-EFFICIENT HASH-BASED MAC PROTOCOL FOR LSN	238
<i>I. Villordo-Jimenez, R. Menchaca-Mendez, M. Rivero-Angeles, N. Torres-Cruz</i>	
CONVOLUTIONAL NEURAL NETWORKS FOR SEMANTIC SEGMENTATION OF MULTISPECTRAL REMOTE SENSING IMAGES	244
<i>J. Lopez, S. Santos, C. Atzberger, D. Torres</i>	
PERFORMANCE ANALYSIS OF SDN NORTHBOUND INTERFACES	249
<i>A. Lara, L. Quesada</i>	
ON THE ACCURACY OF NETWORK LOCALIZATION AND SYNCHRONIZATION	255
<i>Z. Liu, F. Meyer, M. Win</i>	
QOS POLICIES TO IMPROVE PERFORMANCE IN ACADEMIC CAMPUS AND SDN NETWORKS	261
<i>R. Barba, M. Criollo, N. Aimcana, C. Manosalvas, C. Silva-Cardenas</i>	
AN IOT-BASED SMART SOLUTION FOR PREVENTING DOMESTIC CO AND LPG GAS ACCIDENTS	267
<i>J. Gomes, J. Rodrigues, J. Al-Muhtadi, N. Arunkumar, R. Rabelo, V. Furtado</i>	
A NON-WSSUS RICE FADING CHANNEL MODEL FOR VEHICULAR COMMUNICATIONS	273
<i>C. Gutierrez, C. Gomez-Vega</i>	
ON THE INFLUENCE OF THE NON-WSSUS CONDITION IN THE PERFORMANCE OF IEEE 802.11-BASED CHANNEL ESTIMATORS FOR VEHICULAR COMMUNICATIONS	279
<i>N. Ortega, C. Azurdia-Meza, C. Gutierrez, F. Maciel-Barboza</i>	
RAILWAYS NETWORKS – CHALLENGES FOR IOT UNDERGROUND WIRELESS COMMUNICATIONS	285
<i>R. Leles, J. Rodrigues, I. Woungang, R. Rabelo, V. Furtado</i>	
A FAN-BASED SMART SELECTIVE TRAP FOR FLYING INSECTS	291
<i>D. Santos, R. Brandao, G. Duarte, D. Totti, V. Furtado, J. Rodrigues</i>	
NB-IOT RANDOM ACCESS PROCEDURE ANALYSIS	296
<i>G. Baracat, J. Brito</i>	
COMBINING METRICS FOR ROUTE SELECTION IN SDWSN: STATIC AND DYNAMIC APPROACHES EVALUATION	302
<i>D. Oliveira, C. Margi</i>	
Author Index	