

2018 IEEE XXV International Conference on Electronics, Electrical Engineering and Computing (INTERCON 2018)

**Lima, Peru
8-10 August 2018**



IEEE Catalog Number: CFP18D62-POD
ISBN: 978-1-5386-5492-7

**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:	CFP18D62-POD
ISBN (Print-On-Demand):	978-1-5386-5492-7
ISBN (Online):	978-1-5386-5491-0

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

HOW TO FIND IF A SINGLE-BOARD COMPUTER LOSES AUDIO SAMPLES IN AN ISOCHONOUS DATA TRANSFER VIA USB	1
<i>J. Osowsky</i>	
ATTEMPTS TO MEASURE THE BIT ERROR RATE FOR ACCESSING HYBRID: QUANTUM AND CLASSICAL NETWORKS IN SCENARIOS OF THE INTERNET OF THINGS	5
<i>H. Nieto-Chaupis</i>	
MONTE CARLO SIMULATION OF AB-INITIO NANOCOMMUNICATIONS FROM COULOMB-LIKE ELECTRIC FORCES IN BACTERIA POPULATIONS CHEMOTAXIS	9
<i>H. Nieto-Chaupis</i>	
QUANTIFYING AND MODELING THE MEASUREMENT OF THE QUALITY OF EDUCATION IN ELECTRICAL ENGINEERING PROGRAMS: A HEU4RISTIC APPROACH	13
<i>H. Nieto-Chaupis</i>	
SCHEME OF SELF-EVALUATION APPLIED TO ENGINEERING PROGRAMS PREVIOUS TO ACCREDITATION PROCESSES IN EMERGENT LATIN AMERICAN UNIVERSITIES	17
<i>H. Nieto-Chaupis</i>	
MULTIPLE ABSORPTION AND EMISSION OF PHOTONS IN STRONG LASER FIELDS: THE ELECTRODYNAMICS-BASED PATH THROUGH THE HARTEMANN-KERMAN'S RADIATION INTENSITY EQUATION	21
<i>H. Nieto-Chaupis</i>	
A PATH LOSS SIMULATOR FOR THE 3GPP 5G CHANNEL MODELS	25
<i>V. Diaz, D. Aviles</i>	
A SMARTPHONE-ENABLED, PORTABLE AND STAND-ALONE FLUORESCENCE QUANTITATION SYSTEM	29
<i>A. Sanchez, G. Kemper, S. Serpa, L. Melgar, P. Milon</i>	
MAPPING THE RISK OF FOREST FIRES IN PERU'S AMAZON AND ANDEAN FOREST REGIONS USING THE ADABOOST ALGORITHM AND GEOGRAPHIC INFORMATION SYSTEMS	33
<i>V. Bax</i>	
THE IMPACT OF GEOGRAPHICAL RANGE REFINEMENT ON THE IRREPLACEABILITY OF BIODIVERSITY USING THE SIMULATED ANNEALING ALGORITHM IMPLEMENTED IN MARXAN	37
<i>V. Bax</i>	
PATH-FOLLOWING OF A QUADROTOR USING FUZZY SLIDING MODE CONTROL	41
<i>A. Huaman-Loayza</i>	
ELECTRICAL CHARACTERIZATION OF EXTENDED FINS BY USING WIRE-BONDED FINFETS	45
<i>Z.-J. Tang, W.-T. Chang, Y.-Y. Ho</i>	
MR. PIANO: A PORTABLE PIANO TUTORING SYSTEM	48
<i>C.-H. Sun, P.-Y. Chiang</i>	
SHADOW DETECTION IN HIGH-RESOLUTION MULTISPECTRAL SATELLITE IMAGERY USING GENERATIVE ADVERSARIAL NETWORKS	52
<i>G. Morales, D. Arteaga, S. Huaman, J. Telles, W. Palomino</i>	
CAREER PLANNING DEVELOPMENT IN SYSTEM ENGINEERING STUDENTS	56
<i>R. Sandoval, J. Ramos-Diaz</i>	
COMPARATIVE APPROACH ON STRUCTURAL EQUATION MODELING SOFTWARE APPLICATIONS	60
<i>R. Sandoval, J. Ramos-Diaz</i>	
CONTROL SCHEME FOR DISTRIBUTED COMPUTING IN ROBOT NETWORKS DESTINED TO HUMANITARIAN DEMINING	64
<i>V. Sillerico-Juso</i>	
DEEP LEARNING APPLIED TO IDENTIFICATION OF COMMERCIAL TIMBER SPECIES FROM PERU	68
<i>M. Lainez, S. Bustamante, G. Orellana</i>	
ACCURATE TRAJECTORY TRACKING FOR A 3D-PLOTTER USING OPTIMAL PREVIEW CONTROL AND UNKNOWN INPUT OBSERVER	72
<i>A. Huaman-Loayza</i>	

DESIGN AND IMPLEMENTATION OF A GRAPHICAL USER INTERFACE FOR A RADAR SYSTEM.....	76
<i>V. Collazos, E. Jiga, A. Camaco</i>	
A SIMPLE RELIABLE WIRELESS BUS DESIGN FOR HOME AUTOMATION SYSTEMS.....	80
<i>P. Flores, M. Moscoso-Martinez, L. Minchala, A. Vazquez-Rodas, D. Astudillo-Salinas</i>	
LAGUERRE MODEL TO IDENTIFY FORMALDEHYDE POLLUTION IN THE PHENOLIC RESIN REACTORS ENVIRONMENT	84
<i>C. Medina-Ramos, D. Carbonel-Olazabal, M. Pilco-Barrenechea</i>	
A METHOD OF IRRADIANCE DISTRIBUTING OVER AN EFFECTIVE IRRADIATED AREA FOR PHOTOTHERAPY LAMPS.....	88
<i>P. Licla, J. Villalobos, E. Bravo, C. Del Carpio, G. Kemper, C. Aliaga</i>	
AN ALGORITHM FOR ESTIMATING THE VARIATION OF THE JOINT ANGLES OF THE LIMBS OF PERUVIAN PASO HORSE.....	92
<i>R. Gonzales, R. Li, G. Kemper, C. Del Carpio, E. Ruiz</i>	
AN AUTOMATIC CONTROL SYSTEM USING THE S7-1200 PROGRAMMABLE LOGIC CONTROLLER FOR THE ETHANOL RECTIFICATION PROCESS	96
<i>P. Fernandez, C. Del Carpio, E. Rocca, L. Vinces</i>	
CONTROL OF A THREE-AXIS CNC MACHINE USING PLC S7 1200 WITH THE MACH3 SOFTWARE ADAPTED TO A MODBUS TCP/IP NETWORK	100
<i>G. Meza, N. Vinces, C. Del Carpio, M. Klusmann</i>	
AN ALGORITHM FOR THE QUANTIFICATION OF LIPIDS, COLLAGEN AND MUSCLE CELLS IN CORONARY ARTERIES BASED ON DIGITAL IMAGE PROCESSING.....	104
<i>E. Macias, J. Jo, D. Brito, G. Kemper, E. Rivera</i>	
IPV6 CONNECTIVITY AND MANAGEMENT EMULATION FOR REUNA, THE CHILEAN ADVANCED NETWORK	108
<i>J.-I. Castillo-Velazquez, V. Panduro, W. Nino</i>	
APPLYING THE GREY SYSTEMS THEORY TO ASSESS SOCIAL IMPACT FROM AN ENERGY PROJECT.....	112
<i>A. Delgado, I. Romero</i>	
DETECTION OF MINERALS THROUGH THE PROCESSING OF SATELLITE IMAGES	116
<i>E. Lozano-Cotrina, E. Berrospri-Elises, A. Roman-Gonzalez</i>	
POWER SYSTEM UNIT COMMITMENT INCORPORATING WIND ENERGY AND BATTERY ENERGY STORAGE.....	120
<i>F. Pereira, V. Paucar, F. Saraiva</i>	
FRACTIONAL DERIVATIVES MODELING DIELECTRIC PROPERTIES OF BIOLOGICAL TISSUE.....	124
<i>J. Escalante-Martinez, L. Morales-Mendoza, C. Calderon-Ramon, L. Juarez, E. Paredes, J. Garcia, J. Laguna-Camacho, S. Gonzalez-Rocha, E. Mejia-Sanchez, J. Garrido-Melendez, H. Lopez-Calderon, J. Martinez-Castillo</i>	
LINEAR QUADRATIC REGULATOR APPLIED TO THE LOAD-FREQUENCY CONTROL PROBLEM CONSIDERING REHEAT STEAM TURBINE GENERATORS	127
<i>R. Souto, R. Benedito</i>	
FPGA IMPLEMENTATION OF LOW-LATENCY ROBUST ASYNCHRONOUS INTERFACES FOR GALS SYSTEMS	131
<i>T. Curtinhas, D. Oliveira, O Saotome, J. Brandolin</i>	
A REAL-TIME RECOGNITION SYSTEM FOR USER CHARACTERISTICS BASED ON DEEP LEARNING.....	135
<i>D. Fernandez</i>	
IMPLEMENTATION OF A MECHANICAL-ELECTRONIC SYSTEM FOR CHILDREN FROM 7 TO 11 YEARS OLD WITH DUCHENNE MUSCULAR DYSTROPHY	139
<i>M. Medina-De-La-Cruz, A. Mujica-Mariano, G. Tirado-Mendoza</i>	
CREATING AN ONTOLOGICAL NETWORKS TO SUPPORT THE INFERENCE OF PERSONALITY TRAITS AND FACETS.....	143
<i>R. Garcia-Velez, J. Galan-Mena, V. Robles-Bykbaev, M. Lopez-Nores</i>	
DESIGN OF A 3D PRINTER AND INTEGRATED SUPPLY SYSTEM	147
<i>R.-A. Victor, A.-D. Witman, R.-G. Avid</i>	
FP-AK-QIEA-® SEED TO HELP THE CONVERGENCE OF PECO.....	151
<i>J. Saire</i>	
AN EDUCATIONAL SUPPORT TOOL BASED ON ROBOTIC ASSISTANTS, MOBILE APPS, AND EXPERT SYSTEMS FOR CHILDREN WITH DOWN SYNDROME	155
<i>V. Robles-Bykbaev, E. Andrade-Prieto, P. Solorzano-Guerrero, Y. Robles-Bykbaev, F. Pesantez-Aviles, A. Parra-Astudillo</i>	

DESIGN OF A NOVEL 3DOF CLINOSTAT TO PRODUCE MICROGRAVITY FOR BIOENGINEERING APPLICATIONS	159
<i>A. Rojas-Moreno, F. Santos-Rodriguez</i>	
CONTEXT-AWARE MOBILE APPLICATIONS: TAXONOMY OF FACTORS FOR BUILDING APPROACHES.....	163
<i>E. Gomez-Torres, C. Chailiol, S. Gordillo</i>	
ESTIMATION OF THE SURFACE TEMPERATURE IN THE HUAYTAPALLANA MOUNTAIN IN JUNIN, PERU.....	167
<i>K. Santos, M. Poma, J. Nole, M. Quispe, R. Adriano</i>	
RANDOM GENERATION OF EARTH STATION POSITIONS WITHIN AN ELLIPTICAL SATELLITE BEAM.....	171
<i>A. Tamo, A. Hilario-Tacuri</i>	
CLASSIFICATION OF TWO MENTAL TASKS BASE ON KOHONEN'S SELF-ORGANIZING MAP IMPLANTED IN A MICROCONTROLLER ARM.....	175
<i>W. Diaz-Sotelo, A. Roman-Gonzalez</i>	
BER PERFORMANCE OF MM-WAVE BASED SYSTEMS IN RAINFALL SCENARIOS.....	179
<i>A. Hilario-Tacuri, A. Tamo</i>	
RR STRESS TEST TIME SERIES CLASSIFICATION USING NEURAL NETWORKS	183
<i>W. Jaramillo, F. Astudillo-Salinas, L. Solano-Quinde, K. Palacio-Baus</i>	
TUNING TO ADVNETLAB METHODOLOGY FOR THESIS ADVISORY IN SCIENCE AND ENGINEERING FOR ICT	187
<i>J.-I. Castillo-Velazquez, R.-B. Silva-Lopez</i>	
JOHSAN – A MULTISENSORIAL SYSTEM TO SUPPORT THE TEACHING-STIMULATION PROCESSES WITH CHILDREN SUFFERING FROM BRAIN PARALYSIS	191
<i>S. Gonzalez-Gonzalez, J. Guachun-Arias, L. Serpa-Andrade</i>	
DEVELOPMENT AND IMPLEMENTATION OF A GEOLOCATION SYSTEM TO DETERMINE THE APPROXIMATE TIME OF ARRIVAL OF A PUBLIC TRANSPORT BUS TO A USER IN THE CITY OF TRUJILLO-PERU	195
<i>J. Azabache, D. Mendoza, F. Fernandez, R. Gardini</i>	
LOW-COST WEARABLE TECHNOLOGY MODEL TO CONTROL AND MONITOR CHRONIC DISEASES FOR HEALTHCARE	199
<i>A. Pumajulca-Salazar, J. Mac-Choy, J. Armas-Aguirre</i>	
MOBILE TECHNOLOGY MODEL TO COLLECTION INFORMATION OF SELF-ASSISTED CLINICAL HISTORY	203
<i>J. Serrato-Lopez, R. Pacheco-Rojas, J. Armas-Aguirre</i>	
MODELING AND SIMULATION OF KINEMATICS AND TRAJECTORY PLANNING OF A FARMBOT CARTESIAN ROBOT	207
<i>E. Fiestas, S. Prado</i>	
A NEW METHOD OF CLASSIFICATION WITH REJECTION APPLIED TO BUILDING IMAGES RECOGNITION BASED ON TRANSFER LEARNING	211
<i>J. Leon-Malpartida, J. Farfan-Escobedo, G. Cutipa-Arapa</i>	
ECONOMIC BENEFIT AND IMPROVE OF STABILITY IN THE POWER SYSTEM THROUGH THE ULTRA-HIGH SPEED FAULT CLEARING IN TRANSMISSION LINES.....	215
<i>W. Vargas, J. Quispe</i>	
A NOVEL ARCHITECTURE FOR IMPLEMENTATION OF QUASI DELAY INSENSITIVE FINITE STATE MACHINES.....	219
<i>D. Oliveira, O. Verducci, V. Torres, O Saotome, R. Moreno, J. Brandolin</i>	
DOUBLE K-MEANS METHODOLOGY TO DETERMINE GREY CLASSES IN ELECTRIC FREQUENCY VARIATION	223
<i>M. Sacasqui</i>	
2DOF PID CONTROL OF THE ANGULAR POSITION OF A ROTARY TORSION PLANT	227
<i>A. Rojas-Moreno, O. Salazar-Aquino, J. Pampamalco-Jara</i>	
ON THE PARAMETER EXTRACTION OF SHORT CHANNEL UTBB-FDSOI FET'S WITH HIGH-K METAL GATE AND TCAD MODELLING	231
<i>L. Trojman, A. Vacca, L. Procel</i>	
ESTIMATION OF ANGULAR SPEED AND PARK MATRIX FROM RESOLVER POSITION SENSOR SIGNALS WITHOUT USING TRIGONOMETRIC FUNCTIONS	235
<i>R. Garcia, J. Pinto, A. Belini</i>	
ECONOMIC ANALYSIS OF INCENTIVES IN THE ELECTRIC CARS DEPLOYMENT IN LATIN AMERICAN.....	239
<i>E. Ramirez, J. Torres</i>	

COGNITIVE TECHNOLOGY MODEL TO ENHANCED ACADEMIC SUPPORT SERVICES WITH CHATBOTS.....	243
<i>M. Choque-Diaz, J. Armas-Aguirre, P. Shiguihara-Juarez</i>	
MONITORING INDOOR AIR QUALITY BY USING IOT TECHNOLOGY.....	247
<i>J. Esquiagola, M. Manini, A. Aikawa, L. Yoshioka, M. Zuffo</i>	
MOBILE TECHNOLOGY MODEL TO AMBULATORY HEALTHCARE INFORMATION ONLINE USING CLOUD PLATFORM.....	251
<i>E. Candela-Mendoza, L. Cruz-Ipanaque, J. Armas-Aguirre</i>	
FAST CONVOLUTIONAL SPARSE CODING WITH L_0 PENALTY.....	255
<i>P. Rodriguez</i>	
COEP: A SECURE & LIGHTWEIGHT APPLICATION PROTOCOL FOR THE INTERNET OF THINGS	259
<i>M. Esquiagola, L. Costa, M. Zuffo</i>	
A TOOLS FLOW FOR AUTOMATIC SYNTHESIS OF EXTENDED BURST-MODE ASYNCHRONOUS STATE MACHINES.....	263
<i>T. Curtinhas, D. Oliveira, V. Torres, J. Brandolin</i>	
DESIGN AND IMPLEMENTATION OF A NETWORK BASED ON MULTIPATH TCP OF LOCAL PRODUCTION.....	267
<i>M. Wiesse, H. Condon, A. Mendoza</i>	
MINIMAX CHECKERS PLAYING GUI: A FOUNDATION FOR AI APPLICATIONS	271
<i>E. Escandon, J. Campion</i>	
REAL-TIME CORNER DETECTION ON MOBILE PLATFORMS USING CUDA	275
<i>H. Chahuara, P. Rodriguez</i>	
A NEW METHOD TO FAULT LOCALIZATION IN LONG TRANSMISSION LINES CONSIDERING SYNCHRONIZED SAMPLING	279
<i>J. Quispe, E. Orduna</i>	
APPLYING SHANNON ENTROPY TO ANALISE HEALTH SYSTEM LEVEL BY DEPARTMENTS IN PERU	283
<i>A. Delgado, A. Huamani, B. Brillitt</i>	
TRAJECTORY TRACKING CONTROL OF A DIFFERENTIAL WHEELED MOBILE ROBOT: A POLAR COORDINATES CONTROL AND LQR COMPARISON	287
<i>J. Cornejo, J. Magallanes, E. Denegri, R. Canahuire</i>	
WOVEN ANTENNAS FABRICATION: CONDUCTIVE LINEN AND CONDUCTIVE CLOTH TECHNOLOGIES COMPARISONS	291
<i>A. Paredes-Choque, E. Zenteno-Bolanos</i>	
SINGLE-CHANNEL ELECTROMYOGRAPHY BASED ON ARDUINO FOR ANALYSIS OF THE SWING PHASE IN NORMAL GAIT	295
<i>A. Rojas, A. Farfan, M. Ayavaca, V. Cardenas, E. Mora, S. Wong, L. Minchala</i>	
VOICE PROCESSING WITH INTERNET OF THINGS FOR A HOME AUTOMATION SYSTEM.....	299
<i>J. Celis, R. Llanos, S. Castro, S. Sepulveda, B. Medina, D. Guevara, L. Camargo, J. Gomez</i>	
ANALYSIS OF MOVING AVERAGE FILTER FOR IMU MEASUREMENTS ON AN 8-BIT MICROCONTROLLER.....	303
<i>A. Ghio, S. Escalante, J. Tarrillo</i>	
DESIGN OF A WILD MULTIHOP NETWORK TO PROVIDE 3G SERVICE AND TELEHEALTH FOR RURAL PERUVIAN AMAZON.....	307
<i>Q. Tacas, P. Fernandez, J. Antonio</i>	
AN EDUCATIONAL ENVIRONMENT BASED ON DIGITAL IMAGE PROCESSING TO SUPPORT THE LEARNING PROCESS OF BIOMATERIALS DEGRADATION IN STEM CELLS.....	311
<i>Y. Robles-Bykbaev, S. Naya, J. Tarrio-Saavedra, S. Diaz-Prado, C. Sanjurjo, F. Blanco, J. Cornejo-Reyes, L. Garzon, D. Calle-Lopez, V. Robles-Bykbaev</i>	
ENCRYPTED COMMUNICATIONS THROUGH QUANTUM KEY DISTRIBUTIONS ALGORITHMS AND BESSSEL FUNCTIONS.....	315
<i>H. Nieto-Chaupis</i>	
ON THE USE OF THE INTEGRATED GLOBAL RADIOSONDE ARCHIVE IN SATELLITE PROPAGATION STUDIES IN BOLIVIA	319
<i>M. Vilela, G. Siles</i>	
PETEFA: GEOGRAPHIC INFORMATION SYSTEM FOR PRECISION AGRICULTURE	323
<i>W. Palomino, G. Morales, S. Huaman, J. Telles</i>	
HUMAN RESOURCES MANAGEMENT MODEL BASED ON BUSINESS INTELLIGENCE	327
<i>G. Maura-Ayquipa, A. Ramirez-Lazaro, P. Shiguihara-Juarez</i>	

A TEXT FILTER BASED MULTIMEDIA CONTENT RECOMMENDER FOR CHILDREN WITH INTELLECTUAL DISABILITY	331
<i>D. Quisi-Peralta, D. Chiluisa-Castillo, V. Robles-Bykbaev, M. Lopez-Nores, L. Chaglla-Rodriguez</i>	
SMS-BASED ON/OFF MONITOR FOR ELECTRONIC DEVICES	335
<i>A. Hinostroza, J. Perez, J. Astivilca, P. Silva, J. Tarrillo</i>	
ANGULAR POSITION CONTROL OF PERMANENT MAGNET SYNCHRONOUS MOTOR USING COMPENSATION OF THE NONLINEARITIES OF THE DQ-MODEL	339
<i>R. Garcia, J. Pinto</i>	
POS-TAGS FEATURES FOR PROTEIN-PROTEIN INTERACTION EXTRACTION FROM BIOMEDICAL ARTICLES	343
<i>P. Shiguihara-Juarez, N. Murragarra-Llerena, A. Lopes</i>	
PERUVIAN SIGN LANGUAGE RECOGNITION USING LOW RESOLUTION CAMERAS	346
<i>B. Berru-Novoa, R. Gonzalez-Valenzuela, P. Shiguihara-Juarez</i>	
NEW APPROACH OF SERIOUS GAMES IN LUDIC COMPLEMENTS CREATED FOR REHABILITATION THERAPIES IN CHILDREN WITH DISABILITIES USING KINECT	350
<i>A. Perez-Munoz, P. Ingavelez-Guerra, Y. Robles-Bykbaev</i>	
EXCESSIVE GAMING AND INTERNET USE: PRELIMINARY RESULTS WITH ANXIETY AND DEPRESSION AMONG HIGHLY ENGAGED PERUVIAN GAMERS.....	354
<i>J. Ramos-Diaz, O. Kiraly, C. Guevara-Cordero, Z. Demetrovics, M. Griffiths</i>	
AN INTERACTIVE SYSTEM TO AUTOMATICALLY GENERATE VIDEO SUMMARIES AND PERFORM SUBTLES SYNCHRONIZATION FOR PERSONS WITH HEARING LOSS.....	358
<i>I. Cuzco-Calle, P. Ingavelez-Guerra, V. Robles-Bykbaev, D. Calle-Lopez</i>	
IMPLEMENTATION OF A WEB PLATFORM FOR THE PRESERVATION OF AMERICAN NATIVE LANGUAGES	362
<i>N. Melgarejo, L. Camacho</i>	
HIGH GAIN 4X4 RECTANGULAR PATCH ANTENNA ARRAY AT 28GHZ FOR FUTURE 5G APPLICATIONS	366
<i>D. Arizaca-Cusicuna, J. Arizaca-Cusicuna, M. Clemente-Arenas</i>	
AN AUTOMATIC SYSTEM ORIENTED TO COUNTING AND MEASURING THE GEOMETRIC DIMENSIONS OF GRAY TILAPIA FINGERLINGS BASED ON DIGITAL IMAGE PROCESSING.....	370
<i>B. Mejia, A. Salas, G. Kemper</i>	
AUTONOMOUS MOTION OF A MOBILE ROBOT BASED ON POTENTIAL FIELDS AND POLAR CONTROL	374
<i>J.-M. Munoz, E. Munoz-Panduro, O. Ramos</i>	
A SIMPLE MAPPING METHODOLOGY OF GAIT BIOMECHANICS FOR WALKING CONTROL OF A BIPED ROBOT	378
<i>D. Astudillo, L. Minchala, F. Astudillo-Salinas, A. Vazquez-Rodas, L. Gonzalez</i>	
RANDOM EXPLORATION FRAMEWORK FOR AN AUTONOMOUS REAL-TIME GENERATION OF A MAP.....	382
<i>E. Munoz-Panduro, O. Ramos</i>	
OPTIMIZING CUTOFF FREQUENCY IN AN ANTIPODAL VIVALDI ANTENNA FOR GPR APPLICATIONS THROUGH A NOVEL BALUN.....	386
<i>M. Pumallica-Paro, J. Arizaca-Cusicuna, M. Clemente-Arenas</i>	
REMOTE ACQUISITION OF LEAD IN WATER USING ANODIC STRIPPING VOLTAMMETRY METHOD.....	390
<i>F. Lama, J. Tarrillo</i>	
IMPLEMENTATION OF SNR ESTIMATION ALGORITHMS, USING LABVIEW COMMUNICATIONS AND GNU RADIO COMPANION.....	394
<i>M. Chino, H. Miyashiro, J. Luis</i>	
AN INTELLIGENT PLATFORM TO DESIGN AND DEVELOP LOW-COST ASSISTIVE TECHNOLOGIES AND ROBOTIC ASSISTANTS FOR CHILDREN WITH DISABILITIES.....	398
<i>D. Chiluisa-Castillo, F. Ortega-Barreto, V. Robles-Bykbaev, F. Pesantez-Aviles</i>	
SYNCHRONOUS GENERATOR PROTECTION SETTINGS WITH REAL TIME DIGITAL SIMULATOR	402
<i>O. Velasquez, J. Acero</i>	
WATER LEVEL MONITORING SYSTEM BASED ON LOPY4 MICROCONTROLLER WITH LORA TECHNOLOGY.....	406
<i>J. Guaman, F. Astudillo-Salinas, A. Vazquez-Rodas, L. Minchala, S. Placencia</i>	
RELIABILITY EVALUATION OF AUDIO SIGNAL RECOGNITION	410
<i>E. Gershikov, S. Gabler</i>	
Author Index	