

2023 IEEE International Autumn Meeting on Power, Electronics and Computing (ROPEC 2023)

**Ixtapa, Mexico
18-20 October 2023**



**IEEE Catalog Number: CFP2344W-POD
ISBN: 979-8-3503-3689-4**

**Copyright © 2023 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:	CFP2344W-POD
ISBN (Print-On-Demand):	979-8-3503-3689-4
ISBN (Online):	979-8-3503-3688-7
ISSN:	2381-5515

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

Combining Deep Learning with Domain Adaptation and Filtering Techniques for Speech Recognition in Noisy Environments.....	1
<i>Emmanuel De J. Velásquez-Martínez, Aldonso Becerra-Sánchez, José I. De La Rosa-Vargas, Efrén González-Ramírez, Armando Rodarte-Rodríguez, Gustavo Zepeda-Valles, Nivia I. Escalante-García, J. Ernesto Olvera-González</i>	
Low-Cost Current Source Based on GaN Transistor Inverter for Current Power Relay Testing.....	7
<i>Juan Manuel Cano-Gallardo, José Merced Lozano-García, Luis Ramon Merchan-Villalba, Miguel Ángel Juárez-Requena, M. R. A. Paternina</i>	
Analysis and Measurements of the Inrush Current in a 9 kVA Transformer Bank Using Taylor-Fourier	13
<i>Miguel E. Vazquez O., Ulises Escudero, V. Torres-García, A. Zamora-Méndez, M. A. Paternina, Salvador Ramírez</i>	
Analysis of the Integration of Battery-Based Energy Storage Systems in the Planning of Modern Grid Expansion.....	19
<i>L. Tepalcapa San Miguel, N. González Cabrera</i>	
Control Strategy Based on Control Lyapunov Functions Applied to a DC-DC Boost Converter	25
<i>Ivan Nava-Bustamante, Rodrigo Loera-Palomo, José Luis Meza-Medina</i>	
Towards the Embodiment of a LiPo Battery Charger for a 83 kW Sport Motorcycle.....	31
<i>Samuel Martínez García, Kevin Cano Pulido, Ismael Araujo Vargas, Teresa Granados Luna</i>	
Directional Protection Scheme in Distribution Feeders with Distributed Generation	37
<i>Hugo. B. Hernandez, V. Torres-García, N. Solís-Ramos, S. Ramirez-Zavala</i>	
Power Systems Frequency Response Using Frequency Dependent Network Equivalent Based on a Rational Function in the Z-Domain.....	43
<i>Juan Verduzco-Durán, Antonio Ramos-Paz, Aurelio Medina-Rios, Rafael Cisneros-Magaña</i>	
FPGA-Based Reconfigurable Unit for Systems Identification Through RLS Algorithm.....	49
<i>J. Gonzalez-Villagomez, E. Gonzalez-Villagomez, C. Rodriguez-Donate, O. Palillero-Sandoval</i>	
Aggregated Model of Approximate Mechanical Torque in Wind Turbines with PMSG.....	55
<i>Iulianova Roque-Granados, Rodrigo Loera-Palomo, Francisco S. Sellschopp-Sánchez, Carlos Álvarez-Macías</i>	
Principal Component Regression and Partial Least Squares Regression Evaluation of Electrode Performance for Non-Invasive Multimodal Measurement of Arm Muscle Activity	61
<i>Iran Arane Melchor-Uceda, Jose Antonio Gutierrez-Gnecchi, Juan Carlos Olivares-Rojas, Enrique Reyes-Archundia, Alberto Gonzalez-Vazquez</i>	
New Statistical Description for the Reliability of Electric Power Systems.....	67
<i>Alejandro Ayala-Ruiz, Serguei Maximov, José G. Tirado-Serrato</i>	
Impulse Neurons: Phasic Bursts and Tonic Bursts, to Generate Pseudorandom Sequences.....	72
<i>María De Lourdes Rivas B., Juan José Raygoza P., C. Edwin Becerra A., Jaime Rios A., Mario Jiménez, Susana Ortega-Cisneros</i>	

IoT System for Mechanical Faults Detection in Automotive Industry	78
<i>Carlos Alberto Ramírez-Méndez, Jesús Alfredo García-Limón, Juan Pablo Serrano-Rubio</i>	
Data-Driven, Reduced-Order Model Representation of Load and Generation Shedding Schemes	84
<i>Claudia Ñancuan, Juan Quiroz, Hector Chavez, Miguel Herrera</i>	
Towards a Portable Deep Learning-Based Application for Melanoma Cancer Classification	90
<i>Jianhao Wei, Noel Pérez-Pérez, Diego Benítez, Daniel Riofrío, Ricardo Flores-Moyano, Maria Baldeon-Calisto</i>	
Design and Simulation of a Two-Phase Interleaved Power Factor Corrector for an EV Charger	96
<i>Dalia Botaka-Mbimba, Norberto Garcia</i>	
Methodology in the IoT Systems for Applications of Agronomy, Based on the Paradigm of Cyber Physical Systems	102
<i>Alfonso Ordoñez-García, Mario Siller, Ofelia Begovich</i>	
Design and Implementation of an Augmented Reality-Based App for Assembly Lines in Industry 4.0	108
<i>Victor Fernández-Mireles, Margarito Martínez-Cruz, Marco Cardenas-Juarez, Ángel Montalvo-Rodríguez, Victor Alemán-Mendiola</i>	
Hand Movement Classification by Time Domain Feature Extraction in EMG Signals	114
<i>José Manuel López Villagómez, Ruth Ivonne Mata Chávez, Juan Manuel López Hernández, Carlos Rodriguez-Donate</i>	
Three-Phase Modeling of Underground Power Cables and Systems	119
<i>Enrique Acha, Hector Francisco Ruiz Paredes</i>	
Main Characteristics to Consider in a BESS During the Design Process.....	126
<i>Markus Ovaskainen, Teemu Paakkunainen, Santiago Barcón</i>	
Boost Dc-Dc Converter with Energy Storage for Photovoltaic Module Characterization	135
<i>Josué Ricardo Cruz-López, Rodrigo Loera-Palomo, Carlos Álvarez-Macías, Francisco S. Sellschopp-Sánchez</i>	
Driver States Prediction Using Machine Learning Model.....	141
<i>Ivan De Gaona-Marquez, Mariko Nakano, Hector Perez-Meana, Enrique Escamilla-Hernandez, Mario Gonzalez-Lee</i>	
Discrete Wavelet Transform-Based ECG Features Detection and Extraction Using Low-Cost ADS1293EVM	147
<i>Oscar I. Coronado Reyes, Adriana Del C. Téllez Anguiano, José A. Gutiérrez Gneccchi, María E. Olvera Cortes</i>	
Digital Image Protection Against Non-Authorized Artistic Edition	153
<i>Sergio E. Huesca-Flores, O. Ulises Juarez-Sandoval, Jazmin Ramirez-Hernandez, Leobardo Hernandez-Gonzalez</i>	
Brief Overview on Non-Isolated DC-DC Bidirectional Power Converter Topologies.....	159
<i>Diana G. Castañeda-Rubalcaba, José M. Sosa, Gerardo Vázquez-Guzmán, Pánfilo R. Martinez-Rodriguez</i>	
The Current State of Power Generation Plants in Mexico from the Life Cycle Assessment Point of View	165
<i>Diana L. Ovalle-Flores, Rafael Peña-Gallardo, Elvia R. Palacios-Hernández</i>	

Comparative Analysis of Stained Normalization in H&E Histopathological Images of Breast Cancer for Nuclei Segmentation Improvement	171
<i>Héctor Eduardo Zepeda Reyes, Hayde Peregrina Barreto, José Alfonso Cruz Ramos, Gabriela Del Carmen López Armas</i>	
Assessment and Ranking of the Severity of Disturbances in the Mexican Interconnected System.....	177
<i>J. M. Ramos-Guerrero, M. R. A. Paternina, F. R. Segundo Sevilla, A. Obusevs, J. A. Moreno-Corbea, D. Rodales, A. Sánchez, A. Zamora, J. M. Ramírez, José Ortiz-Bejar</i>	
Appropriate Feature Extraction Methods for Detection of Disturbances Associated with Power Quality	183
<i>Pedro R. Pedroza-Martinez, Marco V. Chávez-Báez, Enrique Reyes-Archundia, Aldo V. Rico-Medina, José A. Gutiérrez-Gnecchi, Arturo Méndez-Patiño, Juan C. Olivares-Rojas</i>	
Adaptive Fault-Tolerant Control of an Electromechanical Actuator Considering Viscous and Static Friction	189
<i>D. J. López-Araujo, N. Alvarez-Jarquin</i>	
Simulation of a Traction System in an Electric Vehicle	194
<i>F. Pérez Carmona, J. J. Rodríguez Rivas, D. Memije Garduño, O. Carranza Castillo, R. Ortega González</i>	
Automatic Control of the Intensity and Frequency of Led Light for Indoor Growing Prototypes	200
<i>J. Rubio, O. Begovich</i>	
Under-Frequency Load Shedding Scheme in Power Grids with Renewable Generation.....	206
<i>Mariajose Macario, Andrea Arroyo-Serrano, Luis M. Castro, José H. Tovar-Hernández</i>	
Hjorth Parameters for Broken Rotor Bars Failures Characterization in Induction Motors	212
<i>R. D. Barcenás-Peralta, C. A. Pérez-Ramírez, J. R. Rivera-Guillen, J. P. Amezcua-Sánchez, M. Valtierra-Rodríguez, R. Hernández-Maldonado, J. J. De Santiago-Perez</i>	
Small Signal Analysis of a Buck-Boost Four Port Converter BB-FPC	217
<i>Martin Crespo, Alberto Sánchez</i>	
Analysis of a Resonant Frequency Tracking Method for Induction Heating Systems	223
<i>Flores-García Efrén, De León-Lomelí Luz Roxana, Vázquez-Rivera José Álvaro, Loredó-Limón Rubén</i>	
Equation to Predict Convective Heat Transfer of a Cooling Unit.....	226
<i>Francisco Román Ortiz Bejar, Hugo Cuauhtémoc Gutiérrez Sánchez, Carlos Rubio Maya, J. Jesús Pacheco Ibarra</i>	
A Simple Clustering Technique for the Design of Rotamer Libraries Based on Pairs of Consecutive Residues	233
<i>Sara E. Hernández-Ayón, Carlos A. Brizuela</i>	
Takagi-Sugeno Convex Compensator Design for a Nonlinear System on Real-Time	239
<i>Manuel Elias Pech Dzul, Luis Rodrigo Ramírez Cisneros, Juan Osorio Rodríguez, Juan Anzures Marin, Galileo Cristian Tinoco Santillán, Roberto Tapia Sánchez</i>	
Controllability Analysis of a Quadratic Buck Converter with Redundant Power Processing	246
<i>S. R Méndez-Elizondo, J. A. Morales-Saldaña, I. A. Reyes-Portillo, R. Peña-Gallardo</i>	

Real Time Simulation Based on Software in the Loop of a Battery Energy Storage System Interconnected into the Electrical Networks.....	252
<i>M. A. Rivas, J. R. Rodríguez-Rodríguez, Robenson Jean, Nahomie M. L. Auguste, R. E. Martínez-Vega, N. M. Salgado-Herrera</i>	
Damping Control of Inter-Area Oscillations Using Non-Conventional Equipment.....	257
<i>Camila Castrillón-Franco, M. R. A. Paternina, Felix E. Reyes, Alejandro Zamora-Mendez, Rosa E. Correa, José Ortiz-Bejar</i>	
Fault Tolerant Active Hybrid MMC in HVDC Systems.....	263
<i>Ezequiel Sánchez-García, Juan M. S. Fuentes-Burrueal, Vicente Venegas-Rebollar, Edgar L. Moreno-Goytia</i>	
Detection of Power Quality Disturbances in Real Time Based on FPGA.....	268
<i>Eilen García-Rodríguez, Enrique Reyes-Archundia, José A. Gutiérrez-Gnecchi, Arturo Méndez-Patiño, Marco V. Chávez-Báez, Juan C. Olivares-Rojas</i>	
Interruption Parameterization and Commissioning in the Medium Voltage Network of a Primary Distribution Feeder.....	274
<i>Bryan Gerardo Quito Vidal, Daniela Alejandra Reyes Reinoso, Jorge Luis Rojas Espinoza</i>	
A Study of Reactive Power Compensation of a DFIG Wind Park for the Interconnection to the Mexican Power System.....	280
<i>Alejandra G. Andrade-Partida, Víctor M. Méndez-Abrego, Gabriela G. Esquivel-Barajas</i>	
Using YOLOv8 and Active Contour Models to Detect and Segment Ladybird Beetles in Natural Environments.....	286
<i>Fernanda Quimbamba, Noel Pérez-Pérez, Diego Benítez, Daniel Riofrío, Felipe Grijalva, Fabricio Yépez, Maria Baldeon-Calisto</i>	
Comparative Assessment of Embedded Devices for Natural Language Processing for Biomedical Applications in Spanish.....	292
<i>Jonathan Zavala-Díaz, Juan C. Olivares-Rojas, José A. Gutiérrez-Gnecchi, Adriana C. Téllez-Anguiano, J. Eduardo Alcaraz-Chávez, Enrique Reyes-Archundia</i>	
Control Strategy for an Active Switched Inductor Battery Charger with a High-Gain Output Voltage.....	298
<i>D. Reyes, P. R. Martinez D. Langarica, C. J. Rodriguez-Cortes, A. Hernandez-Gomez</i>	
Auxiliary Short-Circuit Fault Classification for HVDC Systems Based on VCO.....	303
<i>Juan M. S. Fuentes-Burrueal, Edgar L. Moreno-Goytia, Ángel Constantino Barajas</i>	
A Comparative Analysis of HB Based Converters for PV Systems.....	308
<i>Christopher J. Rodríguez-Cortes, Pánfilo R. Martínez-Rodríguez, José M. Sosa-Zúñiga, Gerardo Vázquez-Guzmán, Ángel Hernández-Gómez, David Reyes-Cruz</i>	
Digital Description and Fault Injection of an Induction Machine Model.....	314
<i>Rafael Rojas Galván, Julio Hernandez, José Rangel-Magdaleno</i>	
Impact of Reactive Power Regulation Mode on Reliability of Power Systems with Variable Renewable Energy Sources.....	320
<i>Pedro Lopez Rodriguez, Gustavo Rodriguez Aguilar</i>	
Pseudo Arc-Length Continuation Power Flow Method in a Real-Time Controller.....	327
<i>M. Toro, J. Segundo, N. Visairo, C. Nuñez, A. Esparza, U. Torres</i>	

Didactic Integration of the PowerLogic™ ION7400 Module into the Industrial Networks Laboratory at Universidad Politécnica Salesiana, Ecuador	333
<i>Flavio A. Quizhpi Palomeque, Edison X. Villa Sari, Paul E. Villa Sari</i>	
Super Twisting Control Based on State and Disturbance Observers for a Boost Converter Under Load Changes.....	339
<i>David Cortes-Vega, Juan Anzures-Marin, Hussain Alazki</i>	
Mental State and Driving Performance	345
<i>Alicia Nava, Amadeo Argüelles, Ilse Cervantes</i>	
An Analog Voltage Reconfigurable Logic Gate	351
<i>Irwin A. Diaz-Diaz, Eric Campos</i>	
Frequency Regulation Improvement in Power Systems Using an Output-Feedback Approach.....	356
<i>Oscar J. Arellano-Gonzalez, Fernando Ornelas-Tellez, Claudio R. Fuerte-Esquivel</i>	
Sparsity-Oriented Method for Swift Steady-State Solution of Large-Scale Power Systems Using a Discrete Equivalent Model	362
<i>Julio Cesar Godinez-Delgado, Aurelio Medina-Rios, Rafael Cisneros-Magaña, Jose Luis Guillen-Aguirre</i>	
Overview on Leakage Current Reduction Methods in Single-Phase Grid-Connected Inverters	368
<i>Christopher J. Rodríguez-Cortés, José M. Sosa, Pánfilo R. Martínez, Gerardo Vázquez-Guzmán, Adolfo R. López</i>	
Experimental Platform P-HIL for BESS-Interfaced Active Distribution Grids.....	374
<i>Alfredo Velazquez Ibañez, Juan R. Rodriguez Rodriguez, M. R. A. Paternina, Felix R. Segundo Sevilla, Petr Korba</i>	
Difference of Gaussians for Regions Detection in Cervical Cytology to Help Cancer Diagnosis	380
<i>J. E. Alcaraz-Chávez, A. C. Téllez-Anguiano, J. C. Olivarez-Rojas, K. B. Rodríguez-Medina</i>	
Towards the Full Commissioning of an 83-KW Electric Sport Motorbike	386
<i>Aaron-Héctor Valencia-Ramírez, Pedro-Enrique Velázquez-Elizondo, Ismael Araujo-Vargas, Victor Flores-Ortega, Nancy Mondragón-Escamilla</i>	
ANN Based on MPC for a Three-Phase Active Rectifier	392
<i>Jazmin Ramirez-Hernandez, Oswaldo Ulises Juarez-Sandoval, Leobardo Hernandez-Gonzalez</i>	
Passivity-Based Control for a Fuel Cell/Non-Inverting Buck-Boost Converter System.....	398
<i>Diego Langarica-Cordoba, Carlo A. Beltrán, Pánfilo R. Martínez-Rodríguez, Ángel Hernández-Gómez, Luis H. Díaz-Saldierna, Paras Mandal, César F. Méndez-Barrios</i>	
Hybrid-Computing for Finding Solutions to NP-Complete Problems in Graphs Using Ant Colony Optimization.....	404
<i>Valery A. Villarruel-Mosquera, María Gabriela Zumárraga, Alejandra Ospina, Daniel Riofrío, Diego Benítez, Noel Pérez, Felipe Grijalva, Ricardo Flores Moyano, Maria Baldeon-Calisto</i>	
Geometric Convolutional Neural Network for Point Cloud Object Classification.....	410
<i>Fernando Villarreal Romero, Carlos Villaseñor, Carlos Lopez-Franco, Javier Gomez-Avila, Nancy Arana-Daniel</i>	

Optimal Power Flows Integrating Wind Farms with Spinning Reserve by Pitch Angle Control Deloading	416
<i>Alan Valadez, Gerardo Canizal, Luis M. Castro, Rubén Tapia-Olvera, José H. Tovar-Hernández</i>	
Power System Frequency Control in Regulated Environment Using ESS and DFIG	422
<i>Mario Gómez Zamudio, Juan C. Silva, J. Ortiz</i>	
Optimization of the Model Predictive Control Parameters Using Artificial Bee Colony Algorithm Applied to a Small-Scale Pasteurization Plant	428
<i>Luis Caiza, Diego Benítez, Oscar Camacho</i>	
A Machine Learning Strategy for Detection of Stator Winding Short-Circuit Faults in Induction Motors	434
<i>Angel N. Leon-Olvera, Angel H. Rangel-Rodriguez, David Granados-Lieberman, Juan P. Amezcua-Sanchez, Martin Valtierra-Rodriguez</i>	
Control Proposal for a Grid-Forming Unit with Battery Charging Capability in an Islanded AC Microgrid.....	441
<i>Eduardo Maldonado A., Raul A. De J. Teran G., Javier Perez R.</i>	
Recombination and Technology Complexity in Lead-Acid Batteries for Alternative Energy Vehicles	447
<i>Guadalupe Jaimes Gutiérrez, Arturo Lara Rivero, Artemio Chávez Meza</i>	
Modeling of a Buck-Boost Converter with High Transformation Range for EV	453
<i>Iván A. Reyes-Portillo, Jorge A. Morales-Saldaña, Saúl R. Méndez-Elizondo, Aurelio Hernández-Rodríguez, Claudia A. Rivera-Romero, Elvia R. Palacios-Hernández</i>	
Analysis of Protection Scheme Settings Applied for Shunt Capacitor Banks in 23 kV Electrical Substations.....	459
<i>Ivan R. Castellanos, David Sebastián Baltazar</i>	
Development of a Three-Level Converter for Emulation and Controlled Generation of Faults in Single-Phase Electrical Grids	466
<i>Julio Ordaz-Dehesa, Victor Aviña-Corral, Jose Rangel-Magdaleno, Carlos Morales-Perez</i>	
LFC and AVR Combined Regulation of Multi-Area Interconnected Power System with Low Inertia and High Penetration of Flexible Generation Technologies	472
<i>Angel Constantino Barajas, José L. Murillo Pérez, Carlos A. Meléndez Ceja, Williams G. Najera Guitierrez, Edgar L. Moreno-Goytia, Manuel Madrigal Martínez, Juan M. S. Fuentes-Burrue</i>	
Real-Time Digital Field-Oriented Control of a Three-Phase Permanent Magnet Synchronous Motor	478
<i>Luis Arturo Arellano, Norberto Garcia</i>	
Wind and Mechanical Speed Estimators Using Neural Networks for MPPT Applied to a WECS	484
<i>J. A. Sujol, D. Memije, J. J. Rodriguez, O. Carranza, R. Ortega</i>	
Analysis of Texture Descriptors in Satellital Images to Infer Land Cover Types.....	490
<i>B. Flores-Rojas, H. Peregrina-Barreto, S. Camacho-Lara</i>	
Characterization of Statistically Forced Oscillations : A Spectral Proper Orthogonal Decomposition Approach	496
<i>Erlan R. Murillo-Aguirre, A. Román-Messina</i>	

Mutual Coupling Reduction Between Elements of UWB MIMO Antenna Using DGS Enhancing the Impedance Bandwidth	502
<i>Andrik Nathaniel Navarro-Peralta, Gabriela Leija-Hernández, Luis Alejandro Iturri-Hinojosa</i>	
An Adaptive PI-PBC Approach for Voltage Regulation of a Fuel Cell Based Power System.....	508
<i>Carlo A. Beltrán, Rafael Cisneros, Romeo Ortega, Luis H. Díaz-Saldierna, Diego Langarica-Córdoba</i>	
Exploring the Path Loss of a Hacking Tool for Security Matters in the Internet of Things	514
<i>Roxana Mata-Hernandez, Marco Cardenas-Juarez, Jorge Simón, Enrique Stevens-Navarro, Alessandra Rizzardi</i>	
On the Use of YOLO-NAS and YOLOv8 for the Detection of Sea Lions in the Galapagos Islands	520
<i>Angelo Gil-Bazan, Kevin Gil-Bazan, Diego Benítez, Noel Peréz, Daniel Riofrío, Felipe Grijalva, Fabricio Yépez</i>	
A Topology for Single-Phase PV Transformerless Multilevel Inverters.....	526
<i>G. Vazquez, G. Bustos, L. E. Hernandez-Aguilar, J. M. Sosa, M. A. Juarez-Balderas, P. R. Martinez-Rodriguez, D. Aztatzi-Pluma</i>	
Mitigating the Energy Market Death Spiral Through Long-Term Volume Firming Contracts.....	532
<i>Sumedha Sharma, Mostafa Farrokhhabadi, Hamidreza Zareipour, Petr Musilek</i>	
Power Quality Analysis at a Renewable Energy-Based Charging Station.....	538
<i>Braulio Martínez, Norberto Garcia</i>	
PLL-Based Resonance of a Type-4 Wind Generator in a Series-Compensated Transmission Line	544
<i>Julio Hernández-Ramírez, J. Segundo-Ramírez</i>	
Comparative Study of Iterative Methods for Inverse Kinematics of Redundant Serial Robots with Increasing Degrees of Freedom	550
<i>Luis A. Orbegoso Moreno, D. Valverde Ramírez, M. Pasco Sánchez, L. Ruiz Rodríguez</i>	
Electricity Demand Forecasting for the BCS Region of the Mexican SEN Using Artificial Neural Networks	556
<i>A. Vázquez Mendoza, José H. Tovar Hernández, Héctor F. Ruiz Paredes</i>	
Short-Circuited Turn Fault Detection in Electrical Transformers Based on Frequency Domain Features	562
<i>Daniel Zambrano-Roman, David Camarena-Martinez, Arturo Garcia-Perez, Martin Valtierra-Rodriguez</i>	
Battery-Less Grid-Forming Power Converter as a Smart Load for Microgrid Operating Mode Transition.....	568
<i>Raul A. De J. Teran G., Eduardo Maldonado A., Javier Perez R.</i>	
Automation for Regulation of Deep Hypnosis by Delivery of Propofol and Remifentanil.....	574
<i>Miguel Ramírez-Barrios, Carlos Pérez Gutiérrez, Omar Sandre, Manuel Mera, Patricio Ordaz</i>	
63-Level Asymmetric Capacitor an Inductor Bank Without Discharge Resistors and Reduced Transients	580
<i>Victor Aviña-Corral, Jose Rangel-Magdaleno, Julio Hernandez-Perez</i>	

Methodology for Agave Plants Recognition Based on Superpixels Segmentation and Drone Images 586
Gerardo Asael López-Alfaro, Juan Pablo Serrano-Rubio, Luz María Rodríguez-Vidal, Rafael Herrera-Guzmán

Insulator and Conductive Analysis Material Via Electrical Impedance Tomography 592
Manuel Vázquez Nambo, Enrique Reyes Archundia, José Antonio Gutiérrez Gnechi, Daniel Lorias Espinoza, Jesus Nava De La Fuente

Author Index