

2024 IEEE URUCON

**Montevideo, Uruguay
18-20 November 2024**



IEEE Catalog Number: CFP24K72-POD
ISBN: 979-8-3503-5539-0

**Copyright © 2024 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:	CFP24K72-POD
ISBN (Print-On-Demand):	979-8-3503-5539-0
ISBN (Online):	979-8-3503-5538-3

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

Towards an Experience in AI-Driven Development for Programming Applied to Multimedia using Tabnine	1
<i>Joe Llerena-Izquierdo, Ingrid Fiallos-Vargas, Jonatan Portugal-Gorozabel, Alonso Veloz-Arce</i>	
Wire Bonding Failure Investigation in Semiconductor Packaging Process.....	6
<i>Luana S. Rocha, Iara J. Fernandes, Celso Peter, Paulo R. D. S. Pereira</i>	
Competition Between NCRE, Batteries and Flexible Thermal Units in the Planning of Generation Expansion in Uruguay	10
<i>Gonzalo Casaravilla, Ximena Caporale, Ruben Chaer</i>	
Simulation and Cost Analysis of Announced Green Hydrogen Projects in the Uruguayan Electricity Market in the 2030 – 2050.....	15
<i>Lorena Di Chiara, Felipe Bastarrica, Federico Ferres</i>	
MOP: First Industrial Application of Stochastic Dual Dynamic Programming for Optimization of the Uruguayan Power System.....	19
<i>Juan Mauriz, Rodrigo G. Porteiro, Mario Ibarburu</i>	
Estrategia de Gestión de Energía Para Una VPP Que Integra Fuentes No Convencionales Con El Mercado Eléctrico.	24
<i>Cristhian M. Ortega, Javier R. Fuelagán, Wilson A. Martínez</i>	
Techno-Economic Assesment of a Distributed Generation System for Biogas from Wastewater Treatment Plants	29
<i>Renán J. Orellana-Lafuente, Marcelo A. Paredes-Véliz, Miguel E. Morales-Udaeta, Daniel F. Sempertegui-Tapia</i>	
Study of the Effects of Assistive Devices on the Gait of a Patient with a Non-Union Femur Fracture.....	34
<i>Tomy Suárez, Walter Mar, Mayté Pereyra, Ella Escandón, Carlos D. Novo</i>	
Functional Validation of Biomaterials for Tarsometatarsal Prosthesis	38
<i>Walter Mar, Tomy Suarez, Carlos D. Novo</i>	
Development of an Interactive Tool for the Visualization and Training of Muscular Synergies	42
<i>Juan A. Gandolfo, Melissa Imbert, Pablo Iturralde</i>	
BioZs: An Open Smartwatch Platform for Biomedical Applications	46
<i>Manuel Cortizo, Fabrizio Armario, Felipe López, Leonardo Steinfeld</i>	
Robust Blind Linear Unmixing for Correlated Multimodal Images in Medical Applications.....	51
<i>Daniel U. Campos-Delgado, Juan N. Mendoza-Chavarria, Javier A. Jo, Raquel Leon, Himar Fabelo, Gustavo M. Callico</i>	
Patch Antenna Design on Transparent Substrate with Circular Polarisation for CubeSat Communications.....	56
<i>César B. Moratinos, Benigno R. Díaz, Ana A. Arboleya, Eduardo Martínez-De-Rioja</i>	
Visible Light Communication and Leaky Feeder for 5G and 6G	61
<i>Enrique S. J. Urrutia, Lucio C. Arratia, Pablo Adasme, Andrés Viveros</i>	

A Path Forward: 6G Resource Allocation from a Deep Q-Learning Perspective	65
<i>Lucas Inglés, Claudina Rattaro, Pablo Belzarena</i>	
Optimizing Resource Reuse in the Web of Things	70
<i>Ruben Gomes, Noélia Correia</i>	
On the Transferability of Graph Neural Networks for Resource Allocation in Wireless Networks	75
<i>Santiago Fernández, Romina G. Camargo, Mark Eisen, Alejandro Ribeiro, Federico Larroca</i>	
Discrete Wavelet Transform for Islanding Detection of Photovoltaic Distributed Generators.....	80
<i>Luiza Buscariolli, Ricardo C. Dos Santos, Ahda P. G. Pavani</i>	
Evaluating Individual and Community-Based Utility Functions for Energy Demand Response	85
<i>Sofía Chacón, Katerine Guerrero, Germán Obando, Andrés Pantoja</i>	
Potential Energy Savings for Three Daily Load Profiles Through Reduced Distribution Transformer Losses	90
<i>Diego M. Ferreyra, Gerardo D. Szwarc, Ana C. Sarmiento</i>	
Techno-Economic Analysis of 2nd Life Lithium-Ion Batteries Applied to Street Lighting in Uruguay	94
<i>Mauricio M. da Silva, Vinicius M. Cleff, Conrado F. Dos Santos, Emanuel Antunes, Allan Braz, Sérgio F. P. Dias, Iván Principi</i>	
Lighting Control in Combined Direct Solar Lighting Systems with Optical Fiber and Artificial Lighting with LED	99
<i>Carlos H. V. D. R. Oliveira, Alan L. Pombo, Márcio Z. Fortes</i>	
Enhancing Cattle Farming Management: A Case Study from Uruguay	104
<i>Ernesto Dos Santos, Bruna D. V. Guterres, Ricardo Grando, Je N. J. Junior</i>	
Assessing Protected Areas for Migratory Birds in Uruguay using Correlation Analysis	109
<i>Agustina Ramirez, Lucía De León, Juan S. Blandon, Nelcy N. Atehortua-Sánchez</i>	
Towards a Platform for Assisted Geocoding and Geoanalysis: The Case of Health Information.....	113
<i>Raquel Sosa, Bruno Rienzi, Laura González, Janet Cortés, Valentina Sediey, Valentín Segura</i>	
Assessing Bias in Citizen Science Data Through Linear Regression	118
<i>Avril M. Ráos, Andrea Viazzi, Juan S. Blandon, Julian Gil-Gonzalez</i>	
Clustering of News Texts using Hyperdimensional Computing.....	123
<i>José E. Q. Ibarra, Jorge A. G. Ordiano, Jose-Job Flores-Godoy, Gustavo E. Vazquez</i>	
Basic Analysis of Contribution from Inverter-Interfaced Generation to Short Circuits in the Synchronous Grid.....	128
<i>Elmer Sorrentino, Juan D. H. Santafé</i>	
Performance of Robust Model Predictive Control in Grid-Connected Three-Phase Inverters with Unknown Inductive Filter Parameters	133
<i>Estevão M. De Souza, Lucas F. Encarnação</i>	
Adaptive and Hierarchical Voltage Control: The Overview of Real Time Methodology for Voltage Regulators.....	137
<i>Paulo R. D. S. Pereira, Felipe De Carli, Jorge V. Barbosa, Marcelo P. Vianna, Marcio D. A. Antunes, Luciane N. Canha</i>	

Analyzing Power Converter Losses with PLECS: A Case Study of Current Control Strategies for Induction Motor Applications.....	142
<i>Christian Medina, Paola Maidana, Jorge Rodas, Osvaldo Gonzalez, Julio Pacher</i>	
Evaluation of the Voltage Stability Margin using Capacitor Bank	147
<i>Danielle S. S. De Siqueira, Murilo E. C. Bento</i>	
Assessing the Economic Impact on the Isolated Microgrid System of Brus Laguna During the Solar Eclipses of October 2023 and April 2024.....	151
<i>Lindon P. Fagot, Diego A. Zaldivar</i>	
Accurate Estimation of Solar PV Power Plant Capacity Factors in Uruguay Through Detailed Quality Control and Satellite Gap Filling.....	156
<i>Sandino R. Cabrera, Vivian Teixeira-Branco, Joao V. F. F. Medeiros, Rodrigo Alonso-Suarez</i>	
Design Optimization for Large-Scale Solar Photovoltaic Power Plants in Uruguay.....	161
<i>Rafael Bruno, Claudio Risso, Rodrigo Alonso-Suarez</i>	
Performance Analysis of a Solid-State Thermoelectric Generator using Concentrated Solar Energy	166
<i>Emanuel A. Vieira, Lauren M. M. Machado, Conrado F. Dos Santos, Ivan Principi, Allan Braz</i>	
Comparison of Extracted I-V Curve Parameters of a PV Solar Cell Under Indoor and Outdoor Conditions	171
<i>Jhomer C. Paucua, Jose R. Angulo, Victoria C. Falcon, Miguel A. Sevillano-Bendezu, Ernesto P. Tejada, Michael G. Huamaní, Jan A. Töfflinger</i>	
A Hardware Virtualization Scheme for Reconfigurable Service Providing in the Internet of Things Era	175
<i>Eddie Castro, Daniel Muñoz, Jones Yudi</i>	
Cost-Effective IoT System for Continuous Coastal Marine Temperature and Salinity Monitoring	180
<i>Federico Favaro, Juan P. Oliver, Ariel Sabiguero</i>	
A Cost-Effective System to Measure the Filling Percentage of Solid Waste Containers in Smart Cities.....	184
<i>Jose Joskowicz, Sergio De Cola, Jose L. Nunes, Gonzalo Varalla, Fabrizio Raffaelli, Joaquin Frechero</i>	
Energy Consumption Comparison of NB-IoT Applications Protocols.....	189
<i>Juan Navarro, Pablo Bertrand, Andres Seré, Leonardo Steinfeld</i>	
A Sensor Monitoring System Based on the Internet of Things.....	193
<i>Pamela G. Barboza, Victor D. Castelli, Cindy Ortiz, Wilmar A. P. Castiblanco</i>	
Power Systems Simulation in Open Source Software	198
<i>Steven J. Gomez, Sebastian B. Varela, Brayan A. Tabares</i>	
Overvoltages in a 400 kV Transmission Line with Y-Shaped Composite Pylon: Impact of Line Parameter Calculation Formulations	203
<i>Jaimis S. L. Colqui, Jesus E. G. Asorza, Jose P. Filho, Hanchi Zhang, Filipe F. da Silva, Claus L. Bak</i>	
Fault Localization in Transmission Lines: Discrete Wavelet Transform vs DS Filter	208
<i>Adrian W. Diaz, Jaimis S. L. Colqui, Jose P. Filho</i>	
Techno-Economic Analysis of Single-Circuit Underground Transmission Line Duct Banks	213
<i>Jesus E. G. Asorza, Ricardo A. De Araujo, Jaimis S. L. Colqui, Jose P. Filho</i>	

Parametric Analysis Applied to Electrical Studies using Electromagnetic Transients Programs	218
<i>Luis G. R. De Paula, Benedito D. Bonatto, Pedro P. Balestrassi</i>	
Wind Power Forecast Validation	223
<i>Matilde Ungerovich, Santiago De Mello, Ruben Chaer</i>	
Day-Ahead Photovoltaic Power Forecasting with Limited Data.....	227
<i>Diana E. C. Barragán, Byron A. A. Acurio, Juan López, Hugo Morais, Cindy P. Guzman, Luiz Silva</i>	
Forecasting Seasonal Rainfall in Uruguay: A Comprehensive Analysis using ARIMA and SARIMA Models.....	232
<i>Luana Frias-Telesca, Nelly N. Atehortua-Sánchez, Juan S. Blandon</i>	
Graph Neural Network Method for Integrating Spatial-Temporal Data in Electricity Demand Forecasting	237
<i>Edgar S. Fajardo-Barco, Wilson Achicanoy-Martínez</i>	
Comparison of Random Forest and SARIMA Methods Optimized with Genetic Algorithm for Wind Forecasting	242
<i>Fabricio D. A. Santos, Hellen D. P. De Souza, Nerval D. J. S. Junior, Assiryah S. Gonçalves, Shigeaki L. De Lima</i>	
Prototyping and Testing of an Innovation Management System in a Government Department in Montevideo.....	247
<i>Gerardo Agresta</i>	
Awareness Workshops to Promote Innovation in the Public Sector	251
<i>Gerardo Agresta, Marcelo Carreto, Jessica Stebniki</i>	
Let There Be Trust.....	256
<i>Ariel Sabiguero, Alfonso Vicente, Gonzalo Esnal</i>	
Leveraging LLMs for K-12 Education Assessment: An Open-Ended Question Answering Use Case	261
<i>Germán Capdehourat, Brian Lorenzo, Pedro Porteiro, Joaquín Trigo</i>	
Unlocking RAIN-RFID: An Educational Framework	265
<i>Leandro Shiromizu, Alfredo Arnaud</i>	
Estimation of Tidal Energy Potential and Identification of Hotspots using Random Forest	269
<i>Nerval Junior, Rafael Veras, Shigeaki L. De Lima, Denivaldo Lopes</i>	
Preliminary Studies and Methodologies Applied for Hydrogen Production Through Possible Wind Farm in Paulino Neves, State of Maranhão, Brazil	274
<i>Edley B. da Silva, Silvangela L. Barcelos, Denisson Q. Oliveira, Laís F. Crispino</i>	
Analysis of the Operating History of Brazilian Power Generation Plants using Maintenance Indicators.....	279
<i>Wilson O. R. Parqui, Gabriel Danielsson, Joelson L. da Paixão, Mauricio Sperandio, Alzenira D. R. Abaide</i>	
Service Quality Optimal Regulation in Electrical Energy Distribution Networks	283
<i>Marcio A. Roselli, José A. B. Montevechi, Antonio C. M. De Araujo, Maxwell S. De Carvalho</i>	
Diesel vs. Hybrid Isolated Generation: A Comparative Study for Social Electrification in Gracias a Dios, Honduras	288
<i>Ricardo A. Irias, Pedro A. Corrales, Diego A. Zaldivar</i>	

Selection of Personal Protective Clothing for Arc Flash Risk in Argentina, Based on the “Box Test” Method	293
<i>Ricardo Dias, Carlos D. Arrojo, Hernán A. Nastta, Matías E. Herlein, Josè C. Scaramutti, Horacio M. Frene</i>	
Análisis Crítico de Los Captores Activos ESE y Propuesta de Método Para Determinar La Velocidad de Un Trazador Ascendente Durante El Ensayo Dedicado.....	298
<i>Diego Silva, Marcelo Brehm, Rogelio Sandler</i>	
Regional Lightning Strike Prediction using Ubiquitous and Mobile Electric Field Meter System	302
<i>César D. P. Crovato, Alexandre Mesquita, Angélica F. da Silva, Paulo R. D. S. Pereira</i>	
Desempeño de Una Línea de 150 kV Frente a Las Descargas Atmosféricas	307
<i>Mariana D'Agosto, Michel Artenstein</i>	
Difference in Lightning Study Between HTLS and Conventional Conductor	311
<i>Jesus E. G. Asorza, Jaimis S. L. Colqui, Jose P. Filho</i>	
Optimizing Capacitive Sensor Designs for Precise Void Fraction Measurement in Industrial Applications.....	316
<i>Valter S. Blande, Ricardo A. De Araujo, Walter L. M. Azevedo, José P. Filho, Renan H. M. Callegari</i>	
Thermal Stability of Acrylic Collecting Surface for Acoustic Hail Sensor	321
<i>Florencia Blasina, Nicolás Pérez</i>	
A Measuring System for Low Frequency Noise in Resistive Gas Sensors.....	325
<i>Rafael Puyol, Ruben De Leon, Matias Miguez</i>	
Evaluation of an Ultra Stable Zener Based Voltage Reference.....	329
<i>Daniel Slomovitz, Leonardo Trigo, Heriguati De Souza, Alfredo Jurado</i>	
Display Quality Evaluation for Devices in Education.....	333
<i>Georgina Elola, Leonardo M. Hornak, Juan Pechiar</i>	
Monitoreo No Intrusivo de Cargas Utilizando Datos de Los Medidores Inteligentes de La Red de UTE	337
<i>Camilo Mariñno, Matias Di Martino, Alicia Fernández</i>	
Predictive Modeling for Patient Hospitalization: Enhancing Healthcare Outcomes	341
<i>Collin Merz, Angelo Galioto, M. Liakat Ali</i>	
A Low-Cost Open-Access Navigation System for UAV Applications as a Redundancy System.....	346
<i>Pablo Yanyachi, Jorch Mendoza-Chok, Brayan Espinoza-Garcia, Juan C. Cutipa-Luque, Daniel Yanyachi</i>	
Monitoring the Misti Volcano in Arequipa, Peru using Space Geodesy Techniques	351
<i>Pablo Yanyachi, Claudia Carbajal, Brayan Espinoza-Garcia, Kevynn Rodriguez, Jean P. Boy</i>	
Ramp-Response Time-Domain Dielectric Spectroscopy: Proof of Concept Numerical Analysis.....	356
<i>Eliya Shriki, Eliezer Green, Marcelo David</i>	
Dynamic Thermal Rating of High-Voltage 132 kV Elena – Río Cuarto Power Line	360
<i>Rodrigo Sperman, Sergio N. Bragagnolo, Esteban A. Baez</i>	
Interferencia Eléctrica de Una Línea de Alta Tensión Con Un Gasoducto.....	365
<i>Mariana D'Agosto, Sofía Aparicio, Michel Artenstein, Kamal Arreaza</i>	

Estudio de Las Corrientes de Cortocircuito Por Cables de Guardia OPGW En Líneas de Alta Tensión	369
<i>Mariana D'Agosto, Sofía Aparicio</i>	
Generation of High-Voltage Oscillating Impulse Waveforms	373
<i>Rogelio Sandler, Marcelo Brehm, Daniel Slomovitz</i>	
Alternatives for High Voltage Testing in Laboratories of Reduced Dimensions	378
<i>Rogelio Sandler, Marcelo Brehm, Daniel Slomovitz, Leonardo Barboni, Fernando Silveira</i>	
Exploring Diverse Machine Learning Approaches for Coronary CT Images Analysis: A Comparative Study	382
<i>Santiago Villafuerte, Francisco J. Alvarez-Padilla, Vladimir Trujillo-Olaya, José F. Valencia</i>	
Toward Accessible Neuronavigation: Tracking Retroreflective Markers with a Consumer-Grade Depth Camera.....	387
<i>Jenny Green, Raj Kundu, Angel V. Peterchev, J. M. Di Martino</i>	
Bearing Fault Diagnosis: An Efficient Architecture Based on CNN and Transfer Learning.....	392
<i>Henry F. Losada, Sofía V. Machin, Frank M. Montero</i>	
A CRPS Loss for Deep Probabilistic Regression	397
<i>Franco Marchesoni-Acland, Rodrigo Alonso-Suárez, Andrés Herrera, Josselin Kherroubi, Jean-Michel Morel, Gabriele Facciolo</i>	
Identification of Aging and Contamination on Silicone-Coated Insulators using Multiclass SVM	401
<i>Rodrigo J. Villalobos, Eduardo Richard, Cristian Pesce</i>	
Furuta Pendulum Prototype Control: PID and State Feedback	406
<i>Cristhian Baltazar, Ricardo Gonzales, Edgar Manzano</i>	
Control of a Telescope Mount for Astronomical Observations and LEO Satellite Tracking.....	411
<i>Brayan Espinoza-Garcia, Pablo Yanyachi, Gerson C. Mamani</i>	
Optimizing Robot Pathways for Energy Efficiency: Dijkstra and A* Approaches	416
<i>T. A. Santillán-Mata, F. M. Maciel-Barboza, A. Concha-Sánchez, L. Soriano-Equigua, C. E. B. Goytia-Luna</i>	
Locomotion of Rolling Microrobots Under Rotating Magnetic Fields Within Fluid Media	421
<i>Angel G. H. Torres, Mauricio A. B. Fernandez, Emir A. Vela</i>	
Real-Time Detection of UAV Small Target's Infrared Imaging via OSTD-YOLOv8.....	426
<i>Fida H. Dahri, Asif A. Laghari, Nisar A. Dahri, Ghulam E. M. Abro, Vania V. Estrela, G. G. De Oliveira, Y. Iano, Euclides L. Chuma</i>	
Management of the Electrical and Thermal Demand of a Social Housing in Argentina	431
<i>Sergio N. Bragagnolo, Rodrigo M. Schierloh, Juan I. Amaya, José D. Cortez</i>	
Bidding Assessment in the Brazilian Demand Response Program.....	436
<i>Michael C. Oliveira, Wadaed Uturbey</i>	
Electrical Grid's Load Factor Improvement from Load Modulations and Advanced Measurement Infrastructure	441
<i>Walter Furler, Eder Paredes, Pauline Ocampos, Daniel Aquino, Carlos C. Casañas, Cecilia M. O. Alderete</i>	

Optimal Control of a Unitized Reversible Fuel Cell System for Hydrogen Production with Renewable Power	446
<i>Michael F. da Silva Barbosa, Gustavo A. De Andrade, Julio E. Normey-Rico</i>	
Control Predictivo Robusto Basado En Modos Deslizantes Para Sistema de Generación de Energía	451
<i>Jorge L. Anderson-Azzano, Jerónimo J. Moré, Paul F. Puleston, Carlos Ocampo-Martinez</i>	
Correlation Analysis of LoRa RSSI and Climate Variables for Short-Term Forecasting Models	456
<i>Lorenzo M. Donatti, Carlos H. Barriquello, Tiago B. Marchesan, José B. F. Neto, Daliane Lanzarin, Diogo D. D. E. Santo</i>	
Visible Light Communication Channel Modeling using Variational Autoencoders with Real-World Data	461
<i>Rodrigo F. Miranda, Carlos H. Barriquello, Vitalio A. Reguera</i>	
A Workaround to Indirectly Estimate the Distribution of Classes for an Autonomous System.....	466
<i>José Restaino, Claudio Risso, Cristina Mayr, Eduardo Grampín</i>	
Implementation and Validation of a CubeSat Communications System	471
<i>Simón Lombardozzo, Ezequiel Marranghelli, Ramón L. La Valle, Agustín Catellani, Santiago Rodríguez, Francisco Nuñez, Julián Galván, Ruben M. Fabra</i>	
Recovering QPSK Modulated Visible Light Communication Signals using LSTM-VAE	476
<i>Lorenzo M. Donatti, Carlos H. Barriquello, Rodrigo F. Miranda</i>	
Potential Analysis for the Installation of Floating Photovoltaic Plants Based on Hydro-Solar Complementarity in Brazil	481
<i>Stefany L. da Silva, Ana B. A. Azevedo, Fabíola M. A. Linard, Aryfrance R. Almeida, Bartolomeu F. D. S. Junior</i>	
Integrated Design of Battery Energy Storage System with PV for University Campus Energy Sustainability	486
<i>Alexa B. Bonatto, Benedito D. Bonatto, Gabriel F. Torrezan, Ubiratan F. Castellano, Luiz C. P. Da Silva, Antonio C. Z. De Souza</i>	
Optimal Sizing of Battery Energy Storage Systems in Grid-Connected Power Systems	491
<i>Gabriel L. Medeiros, B. A. Souza</i>	
Analysis of Secondary Distribution Networks with Photovoltaic Systems and Electric Vehicles.....	495
<i>Urbano J. P. Ferreira, Orestes G. O. Rodriguez, Ariel S. Fuentefria, Carlos A. P. Pérez, Alejandro R. M. Alvarez</i>	
Energy Production Related to Bifacial Photovoltaic Power Plants in the Scope of the Ground Albedo Impact	500
<i>Fernando C. Chaim, Miguel E. M. Udaeta, Viviane T. Nascimento, Vanessa M. Massara, André L. V. Gimenes, André F. S. Dos Santos, Leonardo Audálio, Luis C. Araujo</i>	
Sensorless Vector Control Based on MRAS for Three-Phase Induction Machines.....	505
<i>Ivan Szwako, Rodolfo Pedrozo, Larizza Delorme, Magno Ayala, Osvaldo Gonzalez, Jorge Rodas, Carlos Romero</i>	
Closed Loop System Identification using Fractional Order Models.....	509
<i>Hanna Aboukheir, Antonio Di Teodoro</i>	
Attitude Stabilization and Altitude Control of a Twin-Engine Tiltrotor Aerial with Inhomogeneous Propulsion using Optimal Control.....	514
<i>Leonardo C. Botelho, Geovany A. Borges, Eduardo S. Tognetti, João Y. Ishihara</i>	

Behavior Cloning for Mini Autonomous Car Path Following.....	519
<i>Pablo Moraes, Christopher Peters, Hiago Sodre, William Moraes, Sebastian Barcelona, Juan Deniz, Victor Castelli, Bruna Guterres, Ricardo Grando</i>	
Design of Multipurpose Terrestrial Robotic Platform	524
<i>Vitor L. Filardi, Ivano J. Rodowanski</i>	
Strategies for Acquiring Dosimetry of a Non-Autonomous UV-C Light Disinfection Robot at 254 nm.....	529
<i>Maikel R. S. Gambetá-Leite, Rodrigo A. Real, Chiara D. D. D. Nascimento, Everton G. Souza</i>	
Skin-on-a-Chip: Microfluidic Device Development Through Photolithography-Based Microfabrication.....	534
<i>Luíse C. Dalló, Sabrina E. Nunes, Samuel T. Maraschin, Letícia D. M. Mariano, Tayná C. Rodrigues, Ariadna Schuck, Sandro B. Ferreira, Iara J. Fernandes, Celso Peter</i>	
Exosuit for Measuring Lumbar Erector Spinae Stiffness in Adolescents with Idiopathic Scoliosis: A Non-Invasive Monitoring Method.....	538
<i>Cesar L. O. Ruiz, Emir Vela</i>	
Technological Phases of ABDOPRE: A System for Non-Invasive Reduction of Abdominal Hypertension using Servo-Controlled External Negative Pressure	543
<i>Mariana González, Federica Serra, Franco Simini</i>	
3D Ultrasound System Calibration using Stylus	548
<i>Ricardo Illa, Lucas Handalian, David López, Enrique D. Ferreira</i>	
EV Fast-Charging Station: A Methodology to Economical Evaluation of Operation	553
<i>Joelson L. da Paixão, Gabriel Danielsson, Leonardo Da Silva, Alzenira D. R. Abaide, Jordan P. Sausen, Carlos H. Barriquello</i>	
Analysis of the Power Quality of an EV Fast Charging Station	558
<i>Joelson L. da Paixão, Gabriel Danielsson, Leonardo Da Silva, Alzenira D. R. Abaide, Wilson O. R. Parqui, Carlos H. Barriquello</i>	
Voltage Assessment in a Distribution Network with Single-Phase Distributed Generation	563
<i>Victor S. Monteiro, Yuri B. Couto, Márcio Z. Fortes, Bruno W. França, Jesus C. Hernandez</i>	
Fault Location in Electrical Networks using Meta-Heuristic Symbiotic Organisms Search	568
<i>Rafael G. Andrade, Wilingthon G. Zvietcovich, Francisco R. Baracho</i>	
Impact of DERs on the Electric Sector.....	572
<i>Yesika G. Villa, Santiago H. Velásquez, Steven J. Gómez, Nicolas Z. Alzate, Mario G. Vásquez, Brayan A. Tabares</i>	

Author Index