



**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



Time	WEDNESDAY November 4, 2015			
08:00 - 09:00	Registration			
09:00 - 09:30	Opening Ceremony			
09:30 - 10:30	ROPEC 2015 Keynote Speech I: <i>Sliding Mode Control of Power Converters</i> Prof. Vadim Utkin, The Ohio State University, USA Venue: Main Conference Room			
10:30 - 11:00	Industrial Exhibition Opening		Coffee Break	
11:00 - 13:00	FOUR PARALLEL SESSIONS, Venue:			
	Room 1	Room 2	Room 3	Room 4
	Power	SS – Advanced Materials and Devices	Electronics	Electronics
13:10 - 14:10	ROPEC 2015 Keynote Speech II: <i>Adaptive Robust Feedback Design: Attractive Ellipsoid Method</i> Prof. Alexander Poznyak, CINVESTAV-Mexico, Mexico D.F. Venue: Main Conference Room			





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



Time	THURSDAY November 5, 2015				
08:00 - 09:00	Registration				
09:00 - 10:00	ROPEC 2105 Keynote Speech III: <i>Advanced Nanoporous Anodic Alumina Structures for Photonic Applications</i> Prof. Lluís F. Marsal, Universitat Rovira i Virgili, Spain Venue: Main Conference Room				
10:10 - 11:30	FIVE PARALLEL SESSIONS, Venue:				
	Room 1	Room 2	Room 3	Room 4	Room 5
	Power	Computing	SS – Advanced Materials and Devices	SS - Fault Modeling and Diagnosis	SS – Renewable Energy
11:30 - 12:00	Coffee Break				
12:00 - 13:20	FIVE PARALLEL SESSIONS, Venue:				
	Room 1	Room 2	Room 3	Room 4	Room 5
	Power	SS - Computer Vision and Scene Understanding	Electronics	SS - Fault Modeling and Diagnosis	SS – Renewable Energy
13:30 - 14: 30	ROPEC 2105 Keynote Speech IV: <i>Remote Microgrid Research at Waterloo</i> Prof. Claudio Cañizares, University of Waterloo, Canada Venue: Main Conference Room				





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



Time	FRIDAY November 6, 2015				
08:00 - 09:00	Registration				
09:00 - 09:50	ROPEC 2105 Keynote Speech V: <i>Creando el Caso de Negocio para la Mejora de Procesos en Contextos de Baja Madurez</i> Ms. Min Chen, Alcenit Corporation, CEO, Panama Venue: Main Conference Room				
10:00 - 11:20	FIVE PARALLEL SESSIONS				
	Room 1	Room 2	Room 3	Room 4	Room 5
	Power	Computing	Electronics	Electronics	SS – Renewable Energy
11:20 - 12:00	Robots Competition			Coffee Break	
12:00 - 13:20	FIVE PARALLEL SESSIONS				
	Room 1	Room 2	Room 3	Room 4	Room 5
	Power	SS - Evolutionary Computation	Electronics	Electronics	
13:30 - 14:30	ROPEC 2105 Keynote Speech VI: <i>Soft Computing Applied to Engineering and Medicine Complex Problems</i> Prof. Efrén Mezura Montes, Universidad Veracruzana, México Venue: Main Conference Room				
14:30 - 14:40	Closing Ceremony				





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



WEDNESDAY PARALLEL SESSIONS (Time: 11:00 - 13:00)		
Track: Power	Venue: Room 1	Chair: Dr. Horacio Tovar
Time	Paper ID	Title/Author:
11:00 - 11:20	43	<i>Optimal Power Flow Solution Using Modified Flower Pollination Algorithm</i> Jose A. Regalado, Emilio Barocio E., Erick Cuevas
11:20 - 11:40	73	<i>Magnetic Failure Analysis in the feeder of a WRIM using Finite Elements with Comsol</i> F. López-Castillo, C. Pérez-Rojas, S. García-Martínez
11:40 - 12:00	55	<i>Steady-state analysis of inter-turn winding faults in a permanent magnet synchronous motor</i> J. A. Alvarez-Salas, E. Peralta-Sanchez, I.A. Hernandez-Robles, R. Alvarez-Salas
12:00 - 12:20	78	<i>Time-Frequency Analysis of Power Quality Signals using Compact Kernel Distribution Technique</i> David Camarena-Martinez, Martin Valtierra-Rodriguez, Luis Alberto Morales-Hernandez, Juan Primo Benitez-Rangel and Aurelio Dominguez-Gonzalez
12:20 - 12:40	11	<i>Modeling Transformer Differential Protection with Harmonic Restraint</i> Omar López and J. L. Guardado
12:40 - 13:00	126	<i>Reliability and Availability of VSC-HVDC links: A State of the Art</i> J. S. Contreras-Jiménez and F. Rivas-Dávalos





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



WEDNESDAY PARALLEL SESSIONS (Time: 11:00 - 13:00)		
Track: SS - Advanced Materials and Devices	Venue: Room 2	Chair/Organizer: Arturo Escobosa (CINVESTAV - Mexico DF)
Time	Paper ID	Title/Author:
11:00 - 11:20	67	Extraction Procedure for MOS Structure Fringing Gate Capacitance Components J. C. Tinoco, A. G. Martinez-Lopez, G. Lezama, M. Estrada, A. Cerdeira
11:20 - 11:40	165	Bias Stress Study of Metal-Insulator-Semiconductor structures with Pulsed Laser Deposited InGaZnO on Atomic Layer Deposited HfO2 Salvador Ivan Garduño, Magali Estrada, Jesus Israel Mejia, Isai Hernandez, Antonio Cerdeira, Martha Rivas-Aguilar and Manuel Quevedo-Lopez
11:40 - 12:00	94	Proposal of Compact Analytical Modeling for Trigate Junctionless Nanowire Transistors Fernando Ávila-Herrera, Antonio Cerdeira, Magali Estrada, Bruna Cardoso Paz, Marcelo Antonio Pavanello
12:00 - 12:20	131	Physical vapor transport of Bi2Te3 using elemental Bi and Te sources O. Concepción, O. Vazquez, O. de Melo and A. Escobosa
12:20 - 12:40	134	On the gaps observed in High Resolution X-Ray Diffraction scans and the wiggles in reciprocal space maps of high quality crystalline samples A. Escobosa, S. Gallardo-Hernández, A. Tavira M. Lopez-Lopez, R. Cisneros Tamayo and T.V. Torchinska
12:40 - 13:00	166	A 25nA 66.95dB dynamic range CMOS tunable filter for EEC, ECG and EMG measurements Carlos Muniz-Montero, Lilitana H. Salas-Barradas, Luis A. Sanchez-Gaspariano, Alejandro Diaz-Sanchez





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



WEDNESDAY PARALLEL SESSIONS (Time: 11:00 - 13:00)		
Track: Electronics	Venue: Room 3	Chair: Dr. Alain Manzo Martinez
Time	Paper ID	Title/Author:
11:00 - 11:20	180	<i>Pitch angle controllers design for a horizontal axis wind turbine</i> David Cortes Vega, Juan Anzures Marin and Roberto Tapia Sanchez
11:20 - 11:40	72	<i>Controller for a reduced output current ripple DC-DC buck converter</i> Jose M. Sosa, P.R. Martinez-Rodriguez, G. Escobar, J.C. Nava-Cruz, C.A. Limones-Pozos
11:40 - 12:00	36	<i>FPGA-based Delay Compensation on Model Predictive Control for a PM Synchronous Machine</i> Omar Sandre Hernandez, Jose de Jesus Rangel Magdaleno, Roberto Morales Caporal, Esteban Tlelo Cuatle
12:00 - 12:20	99	<i>A buck converter controller design in an electronic drive for LED lighting applications</i> S. Iturriaga-Medina, P. R Martinez-Rodriguez, M. Juarez-Balderas, J. M. Sosa-Zuñiga and C. A. Limones-Pozos
12:20 - 12:40	17	<i>Tuning of PI controller based on optimization techniques for switching converters</i> Carmen Patricia Delgado-Antillón, Rodrigo Loera-Palomo, Daniel Melchor-Aguilar and Jorge Alberto Morales-Saldaña
12:40 - 13:00	156	<i>Fast Response Temperature Model Based on Thermal Data for Joule Heating Process Using Exposed Joint Thermocouple Method</i> Chávez Campos Pascual Neftalí, Chávez Campos Gerardo Marx, and Salazar Torres Juan Alfonso





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



WEDNESDAY PARALLEL SESSIONS (Time: 11:00 - 13:00)		
Track: Electronics	Venue: Room 4	Chair: Dr. Roberto Tapia Sanchez
Time	Paper ID	Title/Author:
11:00 - 11:20	61	Microstrip Patch Antenna Array Design for Wlan Application Ricardo Meneses, Laura Montes and Roberto Linares Y Miranda
11:20 - 11:40	137	High Order Sliding Mode Control for Shunt Active Power Filter Jorge Ramirez, Arturo Castro, Pavel Zuniga and Alma Y. Alanis
11:40 - 12:00	16	Sensor Array System For Real Time Visualization of Magnetostatic Fields and Imaging of Ferrous Objects Diego S. Benítez, Sung Quek, Patrick Gaydecki
12:00 - 12:20	2	RFID Tag Antenna Design applied to the Public Health System as Identification Alternative Ricardo Meneses González, Laura Montes Peralta
12:20 - 12:40	71	FPGA Implementation of Comb-Based Decimation Filter with Improved Frequency Characteristic for SD A/D Converters Application Angel Garcia Robles, Gordana Jovanovic Dolecek and Jose de Jesus Rangel Magdaleno
12:40 - 13:00	127	LabVIEW FPGA-Programmed Real-Time Simulation of a Closed-Loop CD-CD Converter Mario Heras, María del Carmen García, Fernando Martínez, Adriana Téllez y Javier Correa





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



THURSDAY PARALLEL SESSIONS (Time: 10:10 - 11:30)		
Track: Power	Venue: Room 1	Chair: Dra. Elisa Espinosa Juarez
Time	Paper ID	Title/Author:
10:10 - 10:30	27	<i>New Method of Calculation of Temperature Distributions on Transformer Tanks</i> Serguei Maximov, Rafael Escarela Perez, Juan Carlos Olivares-Galvan, Juan Rafael Guzman Arriaga and Eduardo Campero Littlewood
10:30 - 10:50	117	<i>Modeling a Permanent Magnet Generator and its Controller for a Wind Turbine System</i> Diego P. Chacón Troya, Carlos Méndez, Juan Segarra, José M. Aller
10:50 - 11:10	47	<i>Designing Method of Passive Velocity Fields for Control Purposes based on Fuzzy Interpolation</i> Francisco J. Ruiz-Sanchez
11:10 - 11:30	161	<i>Sequential Algorithm-Based Model for the Study of AC/DC Power Flow in MTDC-VSC Systems</i> E. Bojorquez-Melendrez, L. E. Ugalde-Caballero, E. L. Moreno-Goytia





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



THURSDAY PARALLEL SESSIONS (Time: 10:10 - 11:30)		
Track: Computing	Venue: Room 2	Chair: Dr. Felix Calderón
Time	Paper ID	Title/Author:
10:10 - 10:30	118	<i>An approach based on Fourier descriptors and decision trees to perform presumptive diagnosis of esophagitis for educational purposes</i> Luis Serpa-Andrade, Vladimir Robles-Bykbaev, Luis González-Delgado, Jorge Letechipia Moreno
10:30 - 10:50	170	<i>FNN a Fuzzy Version of the Nearest Neighbor Time Series Forecasting Technique</i> Juan J. Flores, Jose Ortiz Bejar, Jose Rafael Cedeno, Carlos Lara-Alvarez and Rodrigo Lopez Farias
10:50 - 11:10	23	<i>Mobile Agent for the Building of Automatic Textual Reports from Web Queries</i> J. Guadalupe Ramos Díaz, Nicolás Jasso García, María Estela Romero Fuentes, Juan Carlos Solorio Leyva, Jorge Luis Salazar Martínez and Lourdes Arlin Campoy Medrano
11:10 - 11:30	83	<i>Multi-class Multi-tag Classifier System for StackOverflow Questions</i> José R. Cedeño González, Juan J. Flores Romero, Mario Graff Guerrero, Felix Calderón
11:30 - 11:50	31	<i>Developing an Implementation Model and Architecture Standard Digital ID</i> Chadwick Carreto, Eduardo Bustos and Fabiola Ocampo





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



THURSDAY PARALLEL SESSIONS (Time: 10:10 - 11:30)		
Track: SS - Advanced Materials and Devices	Venue: Room 3	Chair: Dra. Magali Estrada (CINVESTAV - Mexico DF)
Time	Paper ID	Title/Author:
10:10 - 10:30	92	<i>Effect of the capture cross section of bulk traps in amorphous materials on the frequency dependence of the Capacitance-Voltage characteristic of MIS structures</i> M. Estrada, A. Cerdeira, V.S. Balderrama, I. Garduño, I. Hernandez, J.C. Tinoco, R. Picos, B. Iñiguez
10:30 - 10:50	175	<i>Subthreshold Current Reference Suitable For Energy Harvesting: 20ppm/C and 0.1%/V at 140nW</i> Ali Far
10:50 - 11:10	65	<i>SPICE Model for unipolar RRAM Based on a Flux-Controlled Memristor</i> Eugenio Garcia-Moreno, Rodrigo Picos, Mohamad Moner Al-Chawa
11:10 - 11:30	104	<i>Performance Comparison of BHJ Organic Solar Cells Based on P3HT with PC70BM and ICBA</i> José Guadalupe Sánchez, Víctor Samuel Balderrama, Josep Ferré-Borrull, Lluís Francesc Marsal, Magali Estrada and Josep Pallarès





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



THURSDAY PARALLEL SESSIONS (Time: 10:10 - 11:30)		
Track: SS - Fault Modeling and Diagnosis	Venue: Room 4	Chair/Organizer: Dr. Juan Anzures Marin
Time	Paper ID	Title/Author:
10:10 - 10:30	129	<i>Residual generator based on a Luenberger Observer applied to DC-DC converters</i> Mario Heras, Adriana Tellez, Juan Anzures, Carmen Garcia and Javier Correa
10:30 - 10:50	140	<i>Incorporating dependability in technological systems</i> Brian Manuel González Contreras, E. H. Fernández Martínez, J.V. Galaviz Rodríguez and Fermín Martínez Solís
10:50 - 11:10	101	<i>Linear fault diagnosis: flatness-based versus observer-based approaches</i> Efraim Alcorta Garcia, Rodolfo Castillo Martinez and Alan Fernando Hernandez
11:10 - 11:30	182	<i>On Sensor Fault Diagnosis Problem: Compensator Design to Non Linear System in Real Time</i> J. M. Orozco Sixtos, J. Anzures Marin, M. Heras Cervantes and R. Tapia Sanchez





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



THURSDAY PARALLEL SESSIONS (Time: 10:10 - 11:30)		
Track: SS - Adv. On Renew. Energy	Venue: Room 5	Chair/Organizer: Dr. Fernando Ornelas-Tellez
Time	Paper ID	Title/Author:
10:10 - 10:30	100	<i>A modulation scheme for a 3L-NPC converter in transformerless PV applications</i> J. J. Mendoza-Mendoza, P. R. Martinez-Rodriguez, G. Escobar, J. M. Sosa, G. Vazquez and C. A. Limones
10:30 - 10:50	111	<i>Photovoltaic Panel Characterization by Using Artificial Neural Networks and Comparison with Classical Models</i> José Luis Sánchez-García, Elisa Espinosa-Juárez, Rafael Tapia-Juárez
10:50 - 11:10	151	<i>A Model-Based Controller for a Three-Phase Grid-Connected Modular Multilevel Converter</i> G.A. Catzin-Contreras, A.A. Valdez-Fernandez, G.Escobar and M.J. Lopez-Sanchez
11:10 - 11:30	76	<i>Performance analysis of filters used in three-phase controlled rectifiers of wind power systems</i> J. D. Vidal León, O. Carranza, J. J. Rodríguez, L.G. González





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



THURSDAY PARALLEL SESSIONS (Time: 12:00 - 13:20)		
Track: Power	Venue: Room 1	Chair: Dr. Andres A. Valdez-Fernandez
Time	Paper ID	Title/Author:
12:00 - 12:20	12	<i>3D Finite Element Analysis of Magnetic Shunts and Aluminum Shields in Clamping Frames of Distribution Transformers</i> Sudheer Mokkaaty, Salvador Magdaleno-Adame, Harald Schwarz, Jens Weiss, André Schramm, Juan C Olivares
12:20 - 12:40	154	<i>A Generalized Model-Based Controller for the n-level CHB Multilevel Converter Used as a Shunt Active Filter</i> A.A. Valdez-Fernandez, K.O. Mtepele, D.U. Campos-Delgado and G.Escobar
12:40 - 13:00	21	<i>Dynamic tracking of power system harmonics with a new Kalman-Wavelet technique</i> Shurwayne Lewis, Víctor Nuño, Emilio Barocio, Pavel Zuñiga and Felipe Uribe
13:00 - 13:20	37	<i>Enhanced Hybrid Technique for Calculating Ground Impedances of Underground Power Cables</i> Juan Ramon Morales and Felipe Alejandro Uribe





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



THURSDAY PARALLEL SESSIONS (Time: 12:00 - 13:20)		
Track: SS - Computer Vision and Scene Understanding	Venue: Room 2	Chair: Dra. Daniela Moctezuma
Time	Paper ID	Title/Author:
12:00 - 12:20	98	<i>A Fast Algorithm for Binary Segmentation Using Color Information</i> Felix Calderon, Juan Flores and Adan Garnica-Carrillo
12:20 - 12:40	113	<i>Paynal, a Low Cost Telepresence Robot</i> Roberto Rangel, Leonardo Romero and Moises Garcia
12:40 - 13:00	143	<i>An Efficient Alternative Approach for Home Furniture Detection and Localization by an Autonomous Mobile Robot</i> Oscar Alonso-Ramirez, Yaser Aguas-Garcia, Antonio Marin-Hernandez, Michel Devy, Homero V. Rios-Figueroa
13:00 - 13:20	81	<i>A Texture Based Image Processing Algorithm for Nanoparticles Analysis</i> Diego S. Benitez, Alexis Debut, Luis Cumbal





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



THURSDAY PARALLEL SESSIONS (Time: 12:00 - 13:20)		
Track: Electronics	Venue: Room 3	Chair: Dr. Alain Manzo Martinez
Time	Paper ID	Title/Author:
12:00 - 12:20	25	Experimental assessment of wind gust effect on PVTOL aerial vehicles using a wind tunnel Orlando Martinez, Luis Amezcua-Brooks, Eduardo Liceaga-Castro, Octavio Garcia-Salazar, Daniel Martinez
12:20 - 12:40	125	Offset and frequency compensated CMOS OTA suitable for smart sensors integration Rodolfo Sánchez-Fraga, Carlos Muñiz-Montero, Víctor Ponce-Ponce, Luis A. Sánchez-Gaspariano,
12:40 - 13:00	155	FPGA Design and Implementation of Radix-2 Fast Fourier Transform Algorithm with 16 and 32 Points Josue Saenz S., Juan José Raygoza Panduro, Susana Ortega Cisneros, Edwin C. Becerra A. and Jorge Rivera Dominguez
13:00 - 13:20	45	CMOS Resonant Oscillators RTWO based on Transmission Lines A. K. Armenta Márquez, M. Linares Aranda, L. Hernández Martínez, W. Calleja Arriaga





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



THURSDAY PARALLEL SESSIONS (Time: 12:00 - 13:20)		
Track: SS - Fault Modeling and Diagnosis	Venue: Room 4	Chair/Organizer: Dr. Juan Anzurez Marin
Time	Paper ID	Title/Author:
12:00 - 12:20	58	<i>Design of a Scheme Fault Detection and Localization in Piecewise Linear Systems</i> C. Morales-Morales, V.A. Morales-Rodriguez, M. Adam-Medina, L.G. Vela-Valdés
12:20 - 12:40	80	<i>Fault Estimation Methods for Semi-Active Suspension Systems</i> Diana Hernandez Alcantara, Luis Amezcuita-Brooks, Ruben Morales-Menendez, Oliver Sename and Luc Dugard
12:40 - 13:00		
13:00 - 13:20		





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



THURSDAY PARALLEL SESSIONS (Time: 12:00 - 13:20)		
Track: SS - Adv. On Renew. Energy	Venue: Room 5	Chair/Organizer: M. C. Jose Ortiz Bejar
Time	Paper ID	Title/Author:
12:00 - 12:20	32	<i>Sizing Vertical Heat Exchanger for an Air Conditioning System Using a Geothermal Heat Pump for Social Interest Houses</i> A. Martínez Daniel, G. Pedraza O. Javier, P, M. Covarrubias Crisanto, Ibarra J. Jesús and G. Sánchez H. Cuauhtémoc
12:20 - 12:40	24	<i>Modeling of a Wind Turbine with a Permanent Magnet Synchronous Generator for Real Time Simulations</i> Agustín Tobías-González, Rafael Peña-Gallardo, Jorge Morales-Saldaña, Geydy Gutiérrez-Urueta
12:40 - 13:00	138	<i>Analysis of a micro vertical-axis wind turbine by computational fluids simulation</i> Ramón Jaramillo-Martínez, Manuel Reta-Hernández, Hector R. Vega-Carrillo, Jorge de la Torre y Ramos and Francisco Bañuelos-Ruedas
13:00 - 13:20	66	<i>Control algorithm using Trajectory-Based MPC for MPPT application</i> Marco Antonio Morales-Caporal, Jose de Jesus Rangel-Magdaleno, Juan Manuel Ramirez-Cortes, Esteban Tlelo-Cuatle. Roberto Morales-Caporal





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



FRIDAY PARALLEL SESSIONS (Time: 10:00 - 11:20)		
Track: Power	Venue: Room 1	Chair: Alberto Avalos Gonzalez
Time	Paper ID	Title/Author:
10:00 - 10:20	147	<i>Identification of Weak Buses for Proper Placement of Reactive Compensation Through Sensitivity Analysis Using a Neural Network Surrogate model</i> Isaac Guevara, Marco Gutierrez, Pavel Zuniga
10:20 - 10:40	162	<i>The Application of EMD methods to Power Quality Signals</i> Jose R. Razo-Hernandez, David Camarena-Martinez, Martin Valtierra-Rodriguez, David Granados-Lieberman, Juan P. Amezquita-Sanchez and Carlos A. Perez-Rodriguez
10:40 - 11:00	185	<i>Detection of opportunity areas for improvement between medium voltage circuits by Data Envelopment Analysis</i> A. Avalos, J. Ramos, J. Cerda, A. Guzman and Z. Jimenez
11:00 - 11:20	153	<i>Analysis of electric shock human safety to residential, industrial and medium voltage levels</i> Bryan G. Salvatierra, Diego H. Dominguez, John A. Morales





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



FRIDAY PARALLEL SESSIONS (Time: 10:00 - 11:20)		
Track: Computing	Venue: Room 2	Chair: Dr. Hugo Jair Escalante
Time	Paper ID	Title/Author:
10:00 - 10:20	122	<i>Query by Example Keyword Spotting in Streams of Audio</i> Antonio Camarena-Ibarrola and Martín Ruiz-Pérez
10:20 - 10:40	174	<i>A Non-basic Variable based approach to solve LPs</i> Paulina Rodríguez Cárdenas, Jaime Cerda Jacobo and Jose Alberto Ávalos González
10:40 - 11:00	187	<i>Using χ^2 as a Feature Selection Method to Improve the Performance of a Contextual Entropy Classifier</i> Moisés García Villanueva, Edgar Chávez González, Leonardo Romero Muñoz
11:00 - 11:20	90	<i>Qualitative and Quantitative Multi-Model Forecasting with Nonlinear Noise Filter Applied to Water Demand</i> Rodrigo Lopez Farias, Juan J. Flores, Vicenc Puig
11:20 - 11:40	46	<i>Best Practices to mobiles applications development. Developments carried out by small and medium enterprises in Mexico's midwest region</i> Heberto Ferreira-Medina, José Luis Cendejas-Valdéz, Carlos Arturo Vega-Lebrún, Erick de La Barrera-Monpellier and Adrián Núñez-Vieyra





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



FRIDAY PARALLEL SESSIONS (Time: 10:00 - 11:20)		
Track: Electronics	Venue: Room 3	Chair: Dr. Alain Manzo Martinez
Time	Paper ID	Title/Author:
10:00 - 10:20	63	<i>Real-Time Extended Kalman and H-infinity Filters Performance Comparison for Induction Machine Speed and Torque Estimation</i> Danilo Llano and Alberto Sanchez
10:20 - 10:40	77	<i>Modelling and control of a step-down DC-DC converter based on R2P2 principle</i> Jorge Luis González-Martínez, Carmen Patricia Delgado-Antillón, Jorge Alberto Morales-Saldaña, Geydy Gutiérrez-Urueta and Rafael Peña-Gallardo
10:40 - 11:00	105	<i>Pulsed Power Supply for Electrochemical Machining</i> Ricardo Martínez Alvarado, Efren Everardo Granda Gutierrez, Luis Mario Zuñiga, Rene Guerrero Recio and Wayne N. P. Hung
11:00 - 11:20	60	<i>Comparative evaluation of load observers for a quadratic boost converter</i> Juan C. Nava-Cruz, Jose M. Sosa, Panfilo R. Martinez-Rodriguez, Gerardo Vazquez, Mario A. Juarez





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



FRIDAY PARALLEL SESSIONS (Time: 10:00 - 11:20)		
Track: Electronics	Venue: Room 4	Chair: M. C. Gerardo Marx Chavez Campos
Time	Paper ID	Title/Author:
10:00 - 10:20	168	<i>FPGA-based Design and Implementation of a Phase Detector to Correct the I/Q Imbalance</i> Thaimi Niubo-Aleman, Jose Ricardo Cardenas Valdez, Jose Alejandro Galaviz-Aguilar, J. Apolinar Reynoso-Hernandez, Manuel de Jesus Garcia-Ortega, Jose Cruz Nuñez-Perez
10:20 - 10:40	164	<i>Developing of a Monitoring and Control System of an Electric Load for Domestic Applications</i> Diego P. Chacón Troya and María Fernanda Mena
10:40 - 11:00	136	<i>A Proposed Software Architecture for Controlling a Service Robot</i> Karla Lourdes Luna-Gallegos, Elvia Ruth Palacios-Hernandez, Sergio Hernandez-Mendez, Antonio Marin-Hernandez
11:00 - 11:20	38	<i>Wi-Fi Reflashing System for Electronic Control Units</i> Luis E. González-Jiménez, Héctor A. Rivas-Silva, Daniel Sánchez-Hernández, Raúl Campos Rodríguez, Hiram Rayo Torres Rodríguez





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



FRIDAY PARALLEL SESSIONS (Time: 10:00 - 11:20)		
Track: SS - Adv. On Renew. Energy	Venue: Room 5	Chair/Organizer: Dr. Fernando Ornelas-Tellez
Time	Paper ID	Title/Author:
10:00 - 10:20	13	<i>Low Voltage Ride-Through Analysis in Real Time of a PV-Wind Hybrid System</i> Víctor Pagola-Torres, Rafael Peña-Gallardo and Juan Segundo-Ramírez
10:20 - 10:40	33	<i>Mixed-Signal Simulation of Non-Conventional Controllers for Power Converter Circuits</i> Carlos Jesus Vega Perez, Ricardo Alzate Castano
10:40 - 11:00	59	<i>Reactive Power Regulation and Voltage Compensation through DSTATCOM with Wind Turbine Integration</i> Nadia Salgado-Herrera, Aurelio Medina-Ríos and Roberto Tapia-Sánchez
11:00 - 11:20	88	<i>Methodology for Optimal Bus Placement to Integrate Wind Farm Optimizing Power Flows</i> Ismael Molina-Moreno, Aurelio Medina and Rafael Cisneros-Magaña





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



FRIDAY PARALLEL SESSIONS (Time: 12:00 - 13:20)		
Track: Power	Venue: Room 1	Chair: Dr. Horacio Tovar
Time	Paper ID	Title/Author:
12:00 - 12:20	69	<i>RHONN Identifier for Unknown Nonlinear Discrete-Time Delay Systems</i> Jorge D. Rios, Alma Y. Alanis, Nancy Arana-Daniel and Carlos Lopez-Franco
12:20 - 12:40	107	<i>Evaluation of Progressive Deterioration of a Squirrel Cage Rotor, with a Condition Monitoring System that Implements the SideBand Methodology</i> Pedro V. De Mata-Castrejón, Alejandro Villegas-Ortega, Tomás I. Asiaín-Olivares, Daniel Ruiz-Vega
12:40 - 13:00	135	<i>Resonant Investor in SPWM switching, used for a Solar Photovoltaic Installation Connected to the Network</i> Luis Quevedo, John Morales, Xavier Serrano and Roberto Cabral
13:00 - 13:20	97	<i>Automatic detection and classification of electrical disturbances by means of empirical mode decomposition method</i> Jose L. Gonzalez-Cordoba, Arturo Mejia-Barron and Martin Valtierra-Rodriguez





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



FRIDAY PARALLEL SESSIONS (Time: 12:00 - 13:20)		
Track: SS- Evolutionary Computation	Venue: Room 2	Chair: Dr. Mario Graff Guerrero
Time	Paper ID	Title/Author:
12:00 - 12:20	87	<i>Dynamic Parameter Control in Differential Evolution with Combined Variants to Optimize a Three-Finger End Effector</i> Efrén Mezura-Montes, Edgar-Alfredo Portilla-Flores and Edith Capistran-Gumersindo
12:20 - 12:40	181	<i>Towards the Full Model Selection in Temporal Databases by Using Micro-Differential Evolution. An Empirical Study</i> Nancy Pérez-Castro, Héctor-Gabriel Acosta-Mesa, Efrén Mezura-Montes and Nicandro Cruz-Ramírez
12:40 - 13:00	41	<i>Class-specific feature generation for 1NN through genetic programming</i> Mauricio García Limón, Hugo Jair Escalante, Eduardo Morales and Luis Villaseñor Pineda
13:00 - 13:20	173	<i>Memetic Genetic Programming based on Orthogonal Projections in the Phenotype Space</i> Mario Graff, Eric S. Tellez, Hugo Jair Escalante and Jose Ortiz Bejar





**2015 IEEE AUTUMN MEETING ON POWER, ELECTRONICS AND COMPUTING
XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



FRIDAY PARALLEL SESSIONS (Time: 12:00 - 13:20)		
Track: Electronics	Venue: Room 3	Chair: Dr. Fernando Ornelas Tellez
Time	Paper ID	Title/Author:
12:00 - 12:20	7	<i>Event-Triggered Linear Control Design for an Antilock Braking System</i> Marcela Martinez, Cuauhtémoc Acosta-Lúa, Iván Vázquez-Álvarez and Stefano di Gennaro
12:20 - 12:40	128	<i>Takagi-Sugeno fuzzy model for DC-DC converters</i> Mario Heras, Marlem Flores, Juan Anzures, Adriana Tellez and Carmen Garcia
12:40 - 13:00	54	<i>Stability of fuzzy and LQR controllers applied to a inverted pendulum system</i> Pedro Tellez Cuevas, Aldo Hernandez Luna, Israel Martinez Lopez, Juan Fernando Hernandez Sanchez, Sergio Ivan Morga Bonilla
13:00 - 13:20	144	<i>Optimal Tracking Control for a Single-phase Inverter</i> Febe Jocabed Zavala-Mendoza and Fernando Ornelas-Tellez





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XVII ROPEC INTERNATIONAL
TECHNICAL PROGRAM**



FRIDAY PARALLEL SESSIONS (Time: 12:00 - 13:20)		
Track: Electronics	Venue: Room 4	Chair: Dr. Roberto Tapia Sanchez
Time	Paper ID	Title/Author:
12:00 - 12:20	172	<i>Robust Optimal Tracking Control for a Three Phase Inverter</i> Reynaldo Diaz Sepulveda and Fernando Ornelas-Tellez
12:20 - 12:40	119	<i>Comparative Analysis of the Reliability of Drivers for Power LED</i> Ignacio Villanueva, Mario Juarez, Martinez P. Raymundo, Jose M. Sosa and Gerardo Vazquez
12:40 - 13:00	18	<i>Compact kernel distribution-based approach for broken bars detection on induction motors</i> Carlos Andres Perez-Ramirez and Juan Pablo Amezcuita-Sanchez and Aurelio Dominguez-Gonzalez and Martin Valtierra-Rodriguez and David Camarena-Martinez
13:00 - 13:20	85	<i>Power Calculation Error Propagation Correction using Linear Regression Factors in a Distributed WSN for Household Devices</i> Alberto Sanchez and Santiago Mancheno

