

Productos de las LGACs 2016

Comunicaciones

Publicaciones

- Gordana Jovanovic Dolecek, R. Garcia Baez, G. Molina Salgado, J. de la Rosa, "Novel Multiplierless Wideband Compensator with High Compensation Capability," *Circuits, Systems and Signal Processing*, (Springer), 2016, pp.1-19. Published on line 31 August 2016.
- Ricardo Garcia Baez and Gordana Jovanovic Dolecek, "On simple comb zero rotation: Rouche's theorem approach" *International Journal of Electronics*, 2016, pp.1-14. Published on line 19 Aug. 2016
- Alonso Corona-Chavez, Tejinder Kaur Kataria and Jose Luis Olvera-Cervantes. Dual-band differential filter with complete band independence. *Microwave and Optical Technology Letters*. Vol. 58, No. 4, April 2016. ISSN: 0895-2477. pages 864–868, April 2016
- Alonso Corona-Chavez, T.K. Kataria, Jose Luis Olvera-Cervantes. *Revista Mexicana de Fisica*. Novel balanced Diplexer with band design flexibility. ISSN. 0035-001X *Revista Mexicana de Física* 62 (2016) 304–309 July-August 2016
- Peláez JE, José Luis Olvera-Cervantes, Alonso Corona-Chávez Novel common mode suppression network for the transformation of single-ended to balanced filters. *Microwave and Optical Technology Letters*. 2016 Dec 1; 58(12):2831-3. ISSN 08952477
- Cruz-Pérez E, José Luis Olvera-Cervantes, Alonso Corona-Chávez Analysis and procedure to design differential wideband filters with high-selectivity and high common-mode suppression. *Journal of Electromagnetic Waves and Applications*. 2016 Nov 1:1-0. ISSN 15693937, 09205071
- Escobar-Peláez JA, José Luis Olvera-Cervantes, Alonso Corona-Chávez Planar common-mode suppression network in balanced structures. *Microwave and Optical Technology Letters*. 2016 Oct 1; 58(10):2466-9. ISSN 08952477
- H. Cuchillo-Sánchez, F. Zárate-Rincón, and Reydezel Torres-Torres, "Alternative Determination of the Intrinsic Cut-Off Frequency Applied to a Degraded MOSFET," *IEEE Microwave and Wireless Components Letters*, Vol. 26, No. 9, pp. 693–695, Sep. 2016. ISSN: 1531-1309.
- Sucre, Fabian Zárate, A. Ortiz, F. García, J. Muci, Reydezel Torres-Torres, Roberto-Murphy "A DC Method to Extract Mobility Degradation and Series Resistance of Multifinger Microwave MOSFETs", *IEEE Transactions on Electron Devices*, Vol. 63, No. 5, mayo 2016, pp. 1821-1826
- Diego M Cortés Hernández; Reydezel Torres Torres; Mónico Linares-Aranda; Oscar González Díaz "Piecewise Physical Modeling of Series Resistance and Inductance of OnChip Interconnects". *Solid-State Electronics* 120 (2016) 1–5

- R. Gómez Colín, A. García Juárez, Ignacio E. Zaldívar-Huerta, A. Vera Marquina, L. A. García Delgado, A. L. Leal Cruz and R. Gómez Fuentes, "An experimental distribution of analog and digital information in a hybrid wireless visible light communication system based on acousto-optic modulation and sinusoidal gratings", Journal of Optics, Volume 18, Number 3, 4 February 2016, 035701 (14pp), ISSN: 2040-8978,
- Ignacio E. Zaldívar-Huerta, A. Gabriela Correa-Mena, P. Hernández-Nava, A. García-Juárez, J. Rodríguez-Asomoza and Min Won Lee, "Demonstration and experimental evaluation of a bi-directional 10-GHz microwave photonic filter", Optics & Laser Technology 83 (2016) 76-80, ISSN: 0030-3992
- Jesús Alarcón-Salazar, Ignacio E. Zaldívar-Huerta, and M. Aceves-Mijares, "An optoelectronic circuit with a light source, an optical waveguide and a sensor all on silicon: results and analysis of a novel system", Optics & Laser Technology 84 (2016) 40-47, ISSN: 0030-3992,
- G. Correa-Mena, Ignacio E. Zaldívar-Huerta, J. H. Abril García, A. García-Juárez, A. Vera-Marquina, "Practical application of a bi-directional microwave photonic filter: simultaneous transmission of analog TV-signals", Optical Engineering 55 (10), 106125 (October 2016),
- **Angel Garcia Robles**, and Gordana Jovanovic-Dolecek, "On Non-Recursive Comb-Cosine Decimation Structures", IEEE Latin American Symposium on Circuits and Systems LASCAS 2016, Florianapolis, Brazil, February 28-March, 3, 2016.
- Miriam G. Cruz Jimenez, D. Troncoso, Gordana Jovanovic-Dolecek, "An efficient design of baseband filter for mobile communication, "2016 IEEE International Conference on Electro/Information Technology, EIT 2016, May 19-21, 2016, Grand Forks, North Dakota, USA.
- Gordana Jovanovic-Dolecek, V. Dolecek, I. Karabegovic, "A Simple method to improve magnitude response of CIC decimation filter, "International conference New Technologies: Development and applications, NT 2016, Mostar, Bosnia, ISSN 2303-5668; E-print: ISSN 2303-7520, pp.328-332.
- Gordana Jovanovic-Dolecek, V. Dolecek, "Techniques to improve alias rejection of comb filters," International conference New Technologies: Development and applications, NT 2016, Mostar, Bosnia, ISSN 2303-5668; E-print: ISSN 2303-7520, pp.333-337.
- Gordana Jovanovic-Dolecek, "Exploiting features of symmetric polynomials for improved comb filter design, IEEE Int Conference SPA 2016, Poznan, Poland, ISBN-13-978-83-62065-24-0, IEEE Conference Record # 39630, pp.26-29.
- Gordana Jovanovic-Dolecek, A. Fernandez Vazquez, "Multiplierless TwoStage Comb Structure with an Improved Magnitude Characteristic", Presentado en 2016 IEEE Asia Pacific Conference on Circuits & Systems, Jeju, Korea from October 25-28, 2016.
- R. Garcia Baez, Gordana Jovanovic-Dolecek Modified Comb Decimation Filter: Design and Implementation, Presentado en 2016 IEEE 59th International Midwest Symposium on Circuits and Systems (MWSCAS) 16-19 October 2016, Fairmont Bab Al Bahr Hotel, Abu Dhabi, United Arab Emirates (UAE).

- Gordana Jovanovic-Dolecek, A Novel Comb Compensator with a Good Passband Deviation-Complexity Tradeoff, Presentado en 2016 IEEE 59th International Midwest Symposium on Circuits and Systems (MWSCAS, 16-19 October 2016, Fairmont Bab Al Bahr Hotel, Abu Dhabi, United Arab Emirates (UAE).
- Nitche Jimenez, A. Fernandez Vazquez, Gordana Jovanovic-Dolecek, Blind Sparse Channel Identification Using Subspace-Based Algorithm", Accepted for 2016 IEEE 59th International Midwest Symposium on Circuits and Systems (MWSCAS), 16-19 October 2016, Fairmont Bab Al Bahr Hotel, Abu Dhabi, United Arab Emirates (UAE).
- R. Zamora, F. Harris, Gordana Jovanovic-Dolecek, "Prototype filter Design for channel independence in channelizers", Proc. Vigésimasexta Reunion Internacional de Otoño de Comunicaciones, Computers, Electronica, Aut. ROC&C'2016, Acapulco, Mexico, 27 Dec-Nov,1, 2016
- F. Ojeda, F. Harris, Gordana Jovanovic-Dolecek, "PAPR Reducion and Asynchronous Multiplexing in OFDM Systems", Proc. Vigésimasexta Reunion Internacional de Otoño de Comunicaciones, Computers, Electronica, Aut. ROC&C'2016, Acapulco, Mexico, 27 Dec-Nov,1, 2016
- Arcesio Arbelaez Nieto, Alonso Corona Chavez, Jose Luis Olvera-Cervantes, Carlos E. Saavedra. Active CMOS differential filter with +3.5 dBm IP1dBm and +12.3 dBm IIP3. IEEE MTT-S Latin America Microwave Conference (LAMC-2016). Puerto Vallarta Mexico, Dic. 2016.
- Gabriela Méndez-Jerónimo, S. Sejas-García, C. Nwachukwu, and Reydezel Torres-Torres, "PCB-Substrate Characterization at Multigigahertz Frequencies Through SIW Measurements", DesignCon 2016, Santa Clara, USA, Jan. 2016 [Nominated for the best paper award].
- Jesús Alarcón-Salazar, M. A. Vázquez-A., E. Quiroga-González, I. E. Zaldívar-Huerta, and M. Aceves-Mijares, "Analysis of Light Emitters SRO-based to be Integrated on all-silicon Optoelectronic Circuits", Proceedings of the 12th Conference on PhD Research in Microelectronics and Electronics (PRIME 2016), 27th to the 30th June 2016, Lisbon, Portugal.
- J. Alarcón-Salazar, I. E. Zaldívar-Huerta and Mariano Aceves-Mijares, "Influence of residual stress on optical waveguides applied to biosensors" IBERSENSOR 2016, Valparaiso, Chile. Octubre (2016)
- G. Correa-Mena, I. E. Zaldívar-Huerta, H. García-Abril, A. García-Juárez, L. A. García-Delgado, "Transmission of a wireless signal by using a microwave photonic filter through an optical link", Published in: Ecuador Technical Chapters Meeting (ETCM), IEEE, ISBN: 978-1-5090-1629-7, October 2016, Guayaquil, Ecuador, DOI: 10.1109/ETCM.2016.7750837
- Miguel Antonio Romero Ramírez, José Humberto Abril García, María del Rocío Gómez Colín, Alejandro García Juárez, Ignacio Enrique Zaldívar Huerta, Alicia Vera Marquina, José Rafael Benito Noriega Luna, "Comparación experimental de canales de comunicaciones coaxial y fibra óptica en la transmisión digital ASK", 2o Congreso Iberoamericano de Instrumentación y Ciencias Aplicadas, SOMI XXXI Congreso de Instrumentación. Año 3, No. 01, Octubre 2016, ISSN: 2395-8499, Cd. de Guatemala, Gua.

- Ana Gabriela Correa Mena, Ignacio Enrique Zaldívar Huerta, Jorge Seseña Osorio, Alejandro Aragón Zavala, José Humberto Abril García, Alejandro García Juárez, “Experimental optical transmission of electrical signals in the frequency range of 0.9-2.3 GHz and its distribution by using a radiating cable”, 2o Congreso Iberoamericano de Instrumentación y Ciencias Aplicadas, SOMI XXXI Congreso de Instrumentación. Año 3, No. 01, Octubre 2016, ISSN: 2395-8499, Cd. de Guatemala, Gua.
- Ana Lilia Leal-Cruz, Alicia Vera-Marquina, Armando Rojas-Hernández, Alejandro García-Juárez, Ignacio Zaldivar-Huerta, “A Novel approach for CdSe Nanospheres Synthesis and Their Optical Behavior”, Nanophotonics and Micro/Nano Optics International Conference, December 7-9 2016 in Paris, France.

Diseño de Circuitos Integrados

Publicaciones

- Jesus Moreno, Michel Renovell, Victor Champac-Vilela “Effectiveness of Low Voltage Testing to Detect Interconnect Open Defects under Process Variations”, IEEE Transactions on VLSI Systems, Vol. 24, No. 1, Enero 2016.
- Andres F. Gomez, Victor Champac-Vilela, “Early Selection of Critical Paths for Reliable NBTI Aging-Delay Monitoring”, IEEE Transactions on VLSI Systems, Vol. 24, No. 7, July 2016.
- Hector Villacorta, Jaume Segura, Victor Champac-Vilela, “Impact of Fin-Height on SRAM Soft Error Sensitivity and Cell Stability”, Journal of Electronic Testing: Theory and Applications (JETTA), Springer, Vol. 32, Issue 3, pp. 307-314, 2016.
- Hector Villacorta, Jaume Segura, Victor Champac-Vilela, “Impact of Fin-Height on SRAM Soft Error Sensitivity and Cell Stability”, Journal of ElectronicTesting: Theory and Applications (JETTA), Springer, Vol. 32, Issue 3, pp. 307-314, 2016.
- Freddy Forero, A. Gómez, Victor Champac-Vilela, “Improvement of Negative Bias Temperature Instability Circuit Reliability and Power Consumption Using Dual Supply Voltage”, Journal of Low Power Electronics, Vol. 12, No. 4, pp. 395-402, Diciembre 2016.
- L.F. Cisneros-Sinencio, Alejandro Díaz-Sánchez, J. Ramirez-Angulo, “A Noise-Robust Positive-Feedback Floating-Gate Logic,” IEICE Transactions on Electronics, Vol. E99-C, No 4, pp. 452-457, April 2016.
- G. Zamora-Mejía, J. Martínez-Castillo, J.M.Rocha-Pérez, Alejandro Díaz-Sánchez, “A current mode instrumentation amplifier based on the flipped voltage follower in 0.50 um CMOS,” in Analog Integrated Circuits and Signal Processing (2016) 87:389–398, DOI 10.1007/s10470-016-0731-3.
- G. Zamora-Mejia, J. Martinez-Castillo, J.M. Rocha-Perez and Alejandro Díaz-Sánchez, “A Digitally Enhanced LDO Voltage Regulator For UHF RFID Passive Tags,” IEICE Electronics Express, Vol.13, No.12, 1–10.
- H.C. Bandala-Hernandez, J.M. Rocha-Perez, Alejandro Díaz-Sánchez, J.Lemus-Lopez, H Vazquez-Leal, A. Diaz-Armendariz, J. Ramirez-Angulo, “Weighted Median Filters: An Analog Implementation,” accepted for publication in Integration: The VLSI Journal, 55 (2016) 227–231. <http://dx.doi.org/10.1016/j.vlsi.2016.07.003i>

- Alejandro Díaz-Méndez, Diego Andrés Blanco and Patricia Guzmán Velázquez, "Ethical Considerations for Pain Detection in Non Communicative Patients," in IEEE Latin America Transactions, vol. 14, no. 3, pp. 1135-1138, March 2016. doi: 10.1109/TLA.2016.7459590
- Martínez-González, R. F., José Alejandro Díaz-Méndez, Palacios-Luengas, L., López-Hernández, J., & Vázquez-Medina, R. "A steganographic method using Bernoulli's chaotic maps". Computers & Electrical Engineering. Vol 54, August 2016 pp 435-449.
- H. I. Morales Lopez, J. C. Sanchez Garcia and José Alejandro Díaz-Méndez, "Cataract Detection Techniques: A Review," in IEEE Latin America Transactions, vol. 14, no. 7, pp. 3074-3079, July 2016. doi: 10.1109/TLA.2016.7587604
- Paulina Maya-Hernandez, Ma.Teresa Sanz-Pascual, B. Calvo, "Micropower CMOS lock-in amplifier for portable applications", Electronics Letters, vol. 52, no. 10, pp. 828-830, 2016.
- Carlos Hernández-Mejía, Arturo Sarmiento-Reyes, Héctor Vázquez-Leal, "A novel modeling methodology for memristive systems using homotopy perturbation methods", Circuits, Systems and Signal Processing, Springer-Borkhauser, ISSN 0278-081X, DOI 10.1007/s00034-016-0346-z
- Ramirez-Pinero, H. Vazquez-Leal, V. M. Jimenez-Fernandez, H. M. Sedighi, M. M. Rashidi, U. Filobello-Nino, R. Castaneda-Sheissa, J. Huerta-Chua, Arturo Sarmiento-Reyes, J. R. Laguna-Camacho and F. Castro-Gonzalez. Speed-up hyperspheres homotopic path tracking algorithm for PWL circuits simulations. SpringerPlus, 5:890, 2016, DOI: 10.1186/s40064-016-2534-5
- José Cruz Núñez-Pérez, José Ricardo Cárdenas-Valdez, Katherine Montoya-Villegas, J. Apolinar Reynoso-Hernández, José Raúl Loo-Yau, Christian Gontrand, Esteban Tlelo-Cuautle, "FPGA-Based Test Bed for Measurement of AM/AM and AM/PM Distortion and Modeling Memory Effects in RF PAs", Integration - The VLSI Journal, Special Issue: RFIC Design Technique, vol. 52, no. 1, pp. 291-300, ISSN: 0167-9260, 2016. DOI: 10.1016/j.vlsi.2015.06.007
- José Luis Valtierra-Sánchez de la Vega, Esteban Tlelo-Cuautle, Angel Rodríguez-Vázquez, A Switched-Capacitor Skew-Tent Map Implementation for Random Number Generation, International Journal of Circuit Theory and Applications, ISSN: 0098-9886 (Print) 1097-007X (Online), 2016.
- Esteban Tlelo-Cuautle, **A.C. Sanabria-Borbón**, Optimising Operational Amplifiers by Evolutionary Algorithms and gm/ID Method, International Journal of Electronics, vol. 103, no. 10, pp. 1665-1684, ISSN: 0020-7217, October 2016. DOI: 10.1080/00207217.2016.1138522
- ChristosK.Volos, SundarapandianVaidyanathan, Viet-Thanh Pham, and Esteban Tlelo-Cuautle, Discrete Chaotic Dynamics for Economics and Social Science, Hindawi Publishing Corporation, Discrete Dynamics in Nature and Society, Volume 2016, Article ID 3105084, 2 pages, <http://dx.doi.org/10.1155/2016/3105084>
- Freddy Forero, Andres Gomez, Victor Champac-Vilela, "A Methodology for NBTI Circuit Reliability at Reduced Power Consumption using Dual Supply Voltage", IEEE Latin American Test Symposium, pp. 81-86, 6-8 Abril, 2016.
- **F. Mesalles**, H. Villacorta, M. Renovell, Victor Champac-Vilela, "Behavior and Test of Open-Gate Defects in FinFET Based Cells", European Test Symposium, 23-27 Mayo 2016.
- Andres Gomez, Victor Champac-Vilela, "Critical Path Selection Under NBTI/PBTI Aging for Adaptive Frequency Tuning", IEEE East-West Design & Test Symposium, Octubre 2016.
- G. Zamora-Mejía, J. Martínez-Castillo, Alejandro Díaz-Sánchez, J. M. Rocha-Pérez

and V. R. González-Díaz, "Lower limits of DC-DC power conversion in circuit integrated Buck Converters and 0.50um CMOS 1.65V/250mA buck converter design," 2016 IEEE International Engineering Summit, II Cumbre Internacional de las Ingenierías (IE-Summit), Boca del Rio, 2016, pp. 1-5. doi: 10.1109/IESummit.2016.7459758

- R. F. Martínez-González, Alejandro Díaz-Méndez and R. Vázquez-Medina, "Algorithm for implementing 32-bits represented Bernoulli map using an 8-bits microcontroller," 2016 IEEE International Engineering Summit, II Cumbre Internacional de las Ingenierías (IE-Summit), Boca del Rio, 2016, pp.1-6. doi: 10.1109/IESummit.2016.7459773
- D. A. Blanco, IEEE Graduate Member, J. Annen, A. Piarulli, José Alejandro Díaz-Méndez, IEEE Senior Member, and S. Laureys A Phased Lag Index Study in Patients with Disorders of Consciousness, IEEE-NIH 2016 Special Topics Conference on Healthcare Innovations and Point-of-Care Technologies to be held in Cancun Mexico, 9-11 November 2016.
- **Hector Eduardo De Cos-Cholula**, Gerardo Ulises Díaz-Arango, Luis Hernández-Martínez, Arturo Sarmiento-Reyes, "An Homotopy path method with automatic fixed value assignment of repulsion parameter for mobile robotics", 13th International Conference on Electrical Engineering, Computing Science and Automatic Control (CCE), Mexico City, Mexico, September 2016
- Paulina M. Maya-Hernández, Ma.Teresa Sanz-Pascual, B. Calvo, "Low-power analog lock-in amplifier for high-resolution portable sensing systems", Proc. of the 2016 IEEE International Symposium on Circuits and Systems (ISCAS'16), pp. 486-489, 2016.
- J. Alejandro Martínez-Nieto, Ma.Teresa Sanz-Pascual, N.J. Medrano-Marqués, B. Calvo-López, "Self-biased class AB CMOS current buffer", Proc. of the VII Latin American Symposium on Circuits and Systems (LASCAS'16), pp. 255-258, 2016.
- Martínez-Nieto, Ma. Teresa Sanz-Pascual, A. Márquez, "A CMOS mixed mode non-linear processing unit for adaptive sensor conditioning in portable smart systems", Proc. of the 30th Eurosensors Conference, 2016.
- J. Pérez Bailón, A. Márquez, B. Calvo, N. Medrano, P.A. Martínez, Ma. Teresa Sanz-Pascual, "A fully-integrated CMOS LDO regulator for battery-operated on-chip measurement systems", Proc. of the 30th Eurosensors Conference, 2016.
- Gerardo Díaz-Arango, L. Hernández-Martínez, Arturo Sarmiento-Reyes, H. Vázquez-Leal, "Fast and Robust Homotopy Path Planning Method for Mobile Robotics", IEEE International Symposium on Circuits & Systems, Montreal, Canada May 22-26, 2016.
- Arturo Sarmiento-Reyes, **Jesus Jimenez Leon**, Luis Hernández-Martínez, Hector Vázquez-Leal, "A CAD-oriented simulation methodology for memristive circuits", VII IEEE Latin American Symposium on Circuits and Systems, Florianopolis, Island of Santa Catarina, 2016
- Jesus Lopez-Arredondo, Esteban Tlelo-Cuautle, Francisco V. Fernández, Optimization of LDO Voltage Regulators by NSGA-II, 2016 International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD), ISBN: 978-1-5090-0490-4/16, Lisboa, Portugal, 27-30 June 2016.
- Viet-Thanh Pham, Christos Volos, Esteban Tlelo-Cuautle, Circuitry realization of a novel simple chaotic generator with signum nonlinearity, IEEE Autumn Meeting on Power, Electronics and Computing (ROPEC), At Ixtapa, Mexico, November 9-11, 2016.
- J.C. Nunez Perez, J.A. Sillas Luna, J.R. Cárdenas Valdez, J.A. Galaviz Aguilar, Esteban Tlelo-Cuautle, C.E. Vázquez Lopez, L. Trujillo Reyes, FPGA Realization of RF-PA Models with Memory Effects based on ANFIS, IEEE Autumn Meeting on Power,

- Electronics and Computing (ROPEC), At Ixtapa, Mexico, November 9-11, 2016.
- **Campos-Cruz**, Esteban Tlelo-Cuautle, G. Espinosa-Flores-Verdad, Advances in BTI modeling for the design of reliable ICs, 13th International Conference on Electrical Engineering, Computing Science and Automatic Control (CCE), pp. 1-4, ISBN: 978-1-5090-3511-3, Mexico City, México, September 26-30, 2016.
 - J. Alejandro Martinez-Nieto, M.T. Sanz-Pascual, N. Medrano-Marqués, B. Calvo-López, "Diseño de un procesador analógico-digital para la implementación integrada de redes neuronales en sistemas de bajo consumo", Research in Computing Science, vol. 116, pp. 65-79, 2016.
 - S. Pourashraf, J. Ramirez-Angulo, A. Roman-Loera, A.J. Lopez-Martin, Diaz Sanchez Alejandro, R. G. Carvajal, "High current efficiency class-AB OTA with high open loop gain and enhanced bandwidth" IEICE Electronics Express, Vol. 14, No. 17, pp. 1-5, DOI: 10.1587/elex.14.20170719.

Capítulos de libros, libros

- Esteban Tlelo-Cuautle, Luis Gerardo de la Fraga, José de Jesús Rangel Magdaleno, Engineering Applications of FPGAs: Chaotic Systems, Artificial Neural Networks, Random Number Generators, and Secure Communication Systems, Springer, ISBN: 978-3-319-34113-2, eISBN: 978-3-319-34115-6, 230 pages, 2016. DOI: 10.1007/978-3-319-34115-6
- Martinez-Gonzalez, R. F., Vazquez-Medina, R., José Alejandro Díaz-Méndez & LopezHernandez, J. (2016). FPGA Implementations for Chaotic Maps Using Fixed-Point and Floating-Point Representations. In Field-Programmable Gate Array (FPGA) Technologies for High Performance Instrumentation (pp. 59-97). IGI Global.
- V.H. Carbajal-Gomez, Esteban Tlelo-Cuautle, F.V. Fernandez, Circuit Realization of the Synchronization of Two Chaotic Oscillators with Optimized Maximum Lyapunov Exponent, Ahmad Taher Azar and Sundarapandian Vaidyanathan (Eds), Studies in Fuzziness and Soft Computing: Advances in Chaos Theory and Intelligent Control, Springer-Verlag, pp. 627-651, 2016. DOI: 10.1007/978-3-319-30340-6_26
- Esteban Tlelo-Cuautle, M. Sanchez-Sanchez, V.H. Carbajal-Gomez, A.D. Pano-Azucena, Luis Gerardo de la Fraga, G. Rodriguez-Gomez, On the Verification for Realizing Multi-Scroll Chaotic Attractors with High Maximum Lyapunov Exponent and Entropy, Sundarapandian Vaidyanathan and Christos Volos (Eds), Advances and Applications in Chaotic Systems, Studies in Computational Intelligence, Springer International Switzerland, pp. 311-336, 2016, DOI 10.1007/978-3-319-30279-9_13
- Christos Volos, D.A. Prousalis, S. Vaidyanathan, V.-T. Pham, J.M. Muñoz-Pacheco, Esteban Tlelo-Cuautle, Kinematic Control of a Robot by Using Non-autonomous Chaotic Systems, Sundarapandian Vaidyanathan and Christos Volos (Eds), Advances and Applications in Chaotic Systems, Studies in Computational Intelligence, Springer International Publishing Switzerland 2016, pp. 1-17. DOI: 10.1007/978-3-319-30169-3_1

Proyectos apoyados CONACYT

- Circuitos integrados analógicos para la mejora del desempeño de sistemas sensores portátiles", CB-2015-01, no. proyecto 257985, 2015. Aprobado en Febrero de 2016. Responsable Dra. María Teresa Sanz Pascual

Instrumentación Electrónica

Publicaciones

- José de Jesús Rangel-Magdaleno, H. Peregrina-Barreto, J. Ramirez-Cortes, R. Morales-Caporal, I. Cruz-Vega, "Vibration analysis of partially damaged rotor bar in induction motor under different load condition using dwt", Shock and Vibration, vol. 2016, article ID 3530464, 11 pages, DOI: 10.1155/2016/3530464.
- J.E.G. Salas, R.M. Caporal, E.B. Huerta, J.J. Rodriguez, José Rangel-Magdaleno, "A smart switch to connect and disconnect electrical devices at home by using internet", IEEE Latin America Transactions, vol. 14, no. 4, 2016, DOI: 10.1109/TLA.2016.7483485.
- D. Hernandez-Contreras, H. Peregrina-Barreto, José de Jesús Rangel-Magdaleno, J. Gonzalez-Bernal, "Narrative Review: Diabetic foot and infrared thermography", Infrared Physics and Technology, vol. 78, pp. 105-117, 2016, DOI: 10.1016/j.infrared.2016.07.013. ISSN : 1350-4495
- Israel Cruz-Vega, Carlos Alberto Reyes, Juan Manuel Ramirez, Pilar Gomez and Jose de Jesus Rangel, "Genetic Algorithms based on a Granular Surrogate Model and Fuzzy Aptitude Functions", IEEE WCCI 2016.
- **Carlos Morales-Pérez**, Jose Rangel-Magdaleno, Israel Cruz-Vega, Juan Ramirez-Cortes, Hayde Peregrina-Barreto, FPGA Implementation of Orthogonal Matching Pursuit Algorithm, 2016 13th International Conference on Electrical Engineering, Computing Science and Automatic Control (CCE), Mexico, City. Mexico
- Laura J. Uribe-Valencia, Jorge F. Martínez-Carballido Thesholding methods review for the location of the Optic disc in retinal fundus color images Published in: Electrical Engineering, Computing Science and Automatic Control (CCE), 2016 13th International Conference on Date of Conference: 26-30 Sept. 2016.
- Jonathan Hernández-Capistrán, Jorge F. Martínez-Carballido "Thresholding methods review for microcalcifications segmentation on mammography images in obvious, subtle, and cluster categories" Electrical Engineering, Computing Science and Automatic Control (CCE), 2016 13th International Conference on Date of Conference: 26-30 Sept. 2016.
- Omar Sandre-Hernandez, Jose de Jesús Rangel-Magdaleno, R. Morales-Caporal, "Implementation of direct torque control for a pm synchronous machine based on fpga", 13th International Conference on Power Electronics, Guanajuato, Mexico, 20-23 Junio, 2016.
- B. Lozano-Hernandez, J. Vasquez-Sanjuan, Jose de Jesús Rangel-Magdaleno, L. Olivos-Perez, "Simulink/PSIm/Active-HDL co-simulation of passivity-based speed control of pmsm", 13th International Conference on Power Electronics, Guanajuato, Mexico, 20-23 Junio, 2016.
- M. Morales-Caporal, Jose de Jesús Rangel-Magdaleno, I. Cruz-Vega, R. Morales-Caporal, "Digital simulation of a predictive current control for photovoltaic system based on the mppt strategy", 13th International Conference on Power Electronics, Guanajuato, Mexico, 20-23 Junio, 2016.
- P. Gomez-Gil, Jose de Jesús Rangel-Magdaleno, J.M. Ramirez-Cortes, E. Garcia-Treviño, I. Cruz-Vega, "Intelligent identification of induction motor conditions at several mechanical loads", I2MTC IEEE International Instrumentation and Measurement Technology Conference, Taipei, Taiwan, May, 2016, DOI: 978-1-4673-9220-4/16

Capítulos de libros, libros

- Juan Carlos Sanchez-Diaz, Manuel Ramirez-Cortes, Pilar Gomez-Gil, Jose Rangel-Magdaleno, Israel Cruz-Vega, Hayde Peregrina-Barreto "Spectral Characterization of Content Level Based on Acoustic Resonance: Neural Network and Feedforward Fuzzy Net Approaches". Nature-Inspired Design of Hybrid Intelligent Systems. Studies in Computational Intelligence. Vol. 667, Ed. Melin, P , Castillo, O, Kacprzyk, J. Chapter No. 14, ISBN: ISBN 978-3-319-47054-2

Microelectrónica

Publicaciones

- González-Fernández, J. Juvert, Mariano Aceves-Mijares, C. Domínguez "Monolithic Integration of a Silicon-Based Photonic Transceiver in a CMOS Process" IEEE Photonics Journal Volume 8, Number 1, February 2016. DOI: 10.1109/JPHOT.2015.2505144
- Jesús Alarcón-Salazar, Ignacio E. Zaldívar-Huerta, Mariano Aceves-Mijares, "Electrical and electroluminescent characterization of nanometric multilayers of SiOx/SiOy obtained by LPCVD including non-normal emission", Journal of Applied Physics, 119, 215101 (2016), ISSN: 0021-8979, DOI: <http://dx.doi.org/10.1063/1.4952730>
- Edmundo A. Gutiérrez-Domínguez, et al, "Memory and negative-resistance effects in a strained metal-gate high-k n-type field-effect-transistor from 375K down to 77 K", in Semiconductor Science and Technology, Vol. 31, 10pp. September 2016, <http://dx.doi.org/10.1088/0268-1242/31/12/124003>
- Juan Sabino Martínez-Romero, O.M.Becerra-Fuentes, Peter Halevi "Temporal photonic crystals with modulations of both permittivity and permeability", Physical Review A, 93, 063813 (2016)
- José Roberto Reyes Ayona and Peter Halevi Electromagnetic Wave Propagation in an Externally. , Modulated Low-Pass Transmission Lin IEEE Transactions on Microwave Theory and Techniques 64, 3449 (2016)
- I.Cosme-Bolanos, Andrey Kosarev, S.Mansurova, A.J.Olivarez, H.E.Martinez. "Hybrid photovoltaic structures based on amorphous silicon and P3HT:PCBM.PEDOT:PSS polymer semiconductors", Organic Electronics,v.38, 271-277 (2016).
- Sarai Zárate, Ismael Cosme, Hiram Enrique Martínez, Svetlana Mansurova and Andrey Kosarev, "Effect of Germane in gas phase on Electronic Properties of GeXSiY:H alloys deposited by RF Plasma Discharge "Proc of 13th International conference on Engineering, Computing Sciencee and Automatic Control (CCE) 2016, ISBN 978-1-5090-3511-3/16
- Hiram Martinez, Andrey Kosarev A.B. Pevtsov, A.V. Zherzdev, N.A. Feoktistov and YuriyKudriavtsev, "High Contrast Distributed Bragg Reflectors Based on Si:H/SiC:H

PECVD Multilayer”, Proc CCE 2016 Proc of 13th International conference on Engineering, Computing Science and Automatic Control (CCE) 2016, ISBN 978-1-5090-3511-3/16

- H.E.Martinez, S.Mansurova, I.Cosme, Andrey Kosarev, D.Mayorga Cruz. “Determination of photoelectric parameters of hydrogenated amorphous silicon by the photoelectromotive-force technique”, Proc of 13th International conference on Engineering, Computing Science and Automatic Control (CCE) 2016, ISBN 978-1-5090-3511-3/16
- Sarai Vazquez, Ismael Cosme, Svetlana Mansurova, Andrey Kosarev, “Study of optoelectronic properties of indium tin oxide films fabricated by sputtering in oxygen atmosphere”. Proc of 13th International conference on Engineering, Computing Science and Automatic Control (CCE) 2016, ISBN 978-1-5090-3511-3/16
- Oleksandr Malik, F. Javier De la Hidalga-Wade " Anomalous Shift of the Capacitance-Voltage Characteristics Obtained for p-MOS Capacitors with a Tin-Doped Indium Oxide Gate", ESC Journal of Solid State Science and Technology, 5(7) P377-P379, May 2016, DOI: 10.1149/2.0011607jss
- R. Thamankar, N. Raghavan, Joel Molina-Reyes, F.M. Puglisi, S.J. O’Shea, K. Shubhakar, L. Larcher, P. Pavan, A. Padovani and K.L. Pey, “Single vacancy defect spectroscopy on HfO₂ using Random Telegraph Noise signals from Scanning Tunneling Microscopy”, Journal of Applied Physics, Vol. 119, No. 8, 084304 (2016). ISSN: 0021-8979. DOI: 10.1063/1.4941697
- A.O. Conde, A.S. Gonzalez, R.T. Torres, Joel Molina-Reyes, Roberto S. Murphy-Arteaga and F.J.G. Sanchez, “Conductance-to-Current-Ratio-Based Parameter Extraction in MOS Leakage Current Models”, IEEE Transactions on Electron Devices, Vol. 63, No. 10, pp. 3844-3850 (2016). ISSN: 0018-9383. DOI: 10.1109/TED.2016.2597964.
- Ranjan, N. Raghavan, Joel Molina-Reyes, S. J. O’Shea, K. Shubhakar, and K. L. Pey, “Analysis of quantum conductance, read disturb and switching statistics in HfO₂ RRAM using conductive AFM”, Microelectronics Reliability, Vol. 64, pp. 172-178 (2016). ISSN: 0026-2714. DOI: 10.1016/j.microrel.2016.07.112.
- D.M. Cortes, R. Valderrama, Reydezel Torres-Torres and Joel Molina Reyes, “Modeling a MIM capacitor including series resistance and inductance for characterizing nanometer high-K dielectric films”, Microwave and Optical Technology Letters, Vol. 58, Iss. 11, pp. 2599-2602 (2016). ISSN: 1098-2760. DOI: 10.1002/mop.30103
- Cesar Calleja, A. Torres, Mario Moreno Moreno, P. Rosales, Ma.Teresa Sanz-Pascual, M. Velazquez, “A microbolometer fabrication process using polymorphous silicon-germanium films (pm-Si_xGe_y:H) as thermosensing material”, Physica Status Solidi A, 2016. doi: 10.1002/pssa.201532983
- Carrillo Castillo, R. C. Ambrosio Lázaro, E. M. Lira Ojeda, M. A. De La Mota González, M. A. Quevedo López, Mario Moreno Moreno, V.R. Gonzalez Diaz, J. F. Guerrero Castellanos, "Characterization Of Amorphous CuS Thin Films Obtained From Fast Time And Low Temperature Of Deposition", Chalcogenide Letters, Vol. 13, No. 5, May 2016, P. 217 – 224

- M.A. Dominguez, J.A. Luna-Lopez, Mario Moreno-Moreno, A. Orduña, M. Garcia, S. Alcantara and S. Soto, "Solution-processed transparent dielectric based on spin-on glass for electronic devices", *Revista Mexicana de Física* 62 (2016) 282–284.
- Murias Figueroa, Mario Moreno, Claudia Reyes-Betanzo, A. Torres, P. Rosales, J. Martinez, R. Ambrosio, P. Roca i Cabarrocas, N. Carlos, and A. Itzmoyotl, Effect of substrate temperature on the plasma texturing process of c-Si wafers for black silicon solar cells, *Physica Status Solidi A*, 1 –5 (2016) / DOI 10.1002/pssa.201532954.
- Miguel A. Dominguez, Jose Luis Paub, Mayte Gómez-Castaño, Jose A. Luna-Lopez ,Pedro Rosales Quintero” High mobility thin film transistors based on zinc nitride deposited at room temperature” *Thin Solid Films*, Volume 61, 2014, Pages 260-
- M.A. Domínguez, Pedro Rosales-Quintero, A. Torres, F. Flores, J.A. Luna, S. Alcantara, and Mario Moreno-Moreno, "Impact of planarized gate electrode in bottom-gate thin-film transistors", *Revista Mexicana de Física* 62 (2016) 223–228.
- Fabian Zárate, D. García, V. Vega, Reydezel Torres, Roberto Murphy-Artega, “*Characterization of Hot-Carrier-Induced RF-MOSFET Degradation at Different Bulk Biasing Conditions From S-Parameters*”, *IEEE Transactions on Microwave Theory and Techniques*, Vol. 64, No. 1, enero 2016, pp. 125-132.
- L.K. Sandoval, Roberto Murphy-Arteaga “Tunable Matching Network for Accurate Impedance Measurement of OnChip and PCB Millimeter-Wave Antennas”, *Microwave and Optical Technology Letters*, Vol. 58, No. 10, octubre 2016, pp. 2516-2518.
- Margarita Tecpoyotl-Torres, Ramon Cabello-Ruiz, Jose Gerardo Vera-Dimas, Alfonso Torres-Jacome, Pedro Vargas, Svetlana Koshevaya “Analysis of the Range of Acceleration for an Accelerometer with Extended Beams”;;*International Journal of Electrical and Computer Engineering (IJECE)* Vol. 6, No. 4, August 2016, pp. 1541–1550 ISSN: 2088-8708, DOI: 10.11591/ijece.v6i4.9955
- Jorge Roberto Zurita-Sánchez, "Coherence properties of the electric field generated by an incoherent source of currents distributed on the surface of a sphere", *J. Opt. Soc. Am. A* 33, 118 (2016).
- I.Cosme, A.J.Olivares, Andrey Kosarev, S.Mansurova. “Electronic characterization of PEDOT:PSS thin films with application in hybrida-Si:H solar cells”, *Proc. of 10th Int Conference on Amorphous Semiconductors*, St.-Petersburg, Russia, 4-7 July 2016 p.244-245 .
- Andrey Kosarev, S.Mansurova, I.Cosme. “Promising combination of organic-PECVD inorganic semiconductors for device application”, p.14. *Proc. of 10th Int Conference on Amorphous Semiconductors*, St.-Petersburg, Russia, 4-7 July 2016 p.244-245.
- Carlos Ramón Báez Álvarez, Mónico Linares Aranda, Alfonso Torres Jacome, Wilfrido Calleja-Arriaga, "Test structures for residual stress monitoring in the integrated CMOS-MEMS process development" *13th International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design, SMACD*, pp. 1-4, 27-30 June 2016, Lisbon, Portugal 978-1-5090-0490-4/16/\$31.00 ©2016 IEEE
- Carlos Ramón Báez Álvarez, Wilfrido Calleja Arriaga, Alfonso Torres Jacome, Mónico Linares Aranda."A Monolithic Integrated MEMS Process Design" *13th International*

Conference on Electrical Engineering, Computing Science and Automatic Control (CCE), September 26-30, 2016.

- Ranjan, N. Raghavan, K. Shubhakar, R. Thamankar, Joel Molina-Reyes, S.J. O'Shea, M. Bosman and K.L. Pey, "CAFM based Spectroscopy of Stress-Induced Defects in HfO₂ with Experimental Evidence of the Clustering Model and Metastable Vacancy Defect State", Proceedings of the IEEE, International Reliability Physics Symposium IRPS2016. Vol. 1, pp. 1-7. (2016).
- Joel Molina-Reyes, H. Uribe, C. Zuniga and W. Calleja, "Modeling, simulation and experimental verification of the carrier conduction mechanisms of MIS capacitors based on ultra-thin ALD Al₂O₃ and post-metallization annealing", Proceedings of the 16th Atomic Layer Deposition Conference ALD2016. Vol. 1, pp. 1-8 (2016).
- Joel Molina-Reyes, H. Uribe, C. Zuniga and W. Calleja, "Enhanced resonant tunneling in MIIS devices fabricated with ultra-thin high-k oxides by the application of an external magnetic field and low temperature", Proceedings of the XXV International Materials Research Congress IMRC2016. Vol. 1, pp. 1-7 (2016).
- Joel Molina-Reyes, O. Lopez, C. Zuniga and W. Calleja, "CAD Simulation, Processing and Characterization of Schottky-Barrier MOSFET Devices based on Metal Gate/High-k Materials", Proceedings of the XXV International Materials Research Congress IMRC2016. Vol. 1, pp. 1-5 (2016).
- O. Gelvez- Lizarazo and Claudia Reyes-Betanzo, Characterization of Residual Stress in a-SiC:H Deposited by RF-PECVD for Manufacturing of Membranes for Cell Culture MRS Online Proceedings Library Archive, Volume 1812, 2016, imrc2015s6b-p007 doi: 10.1557/opl.2016.27, Published online by Cambridge University Press 02 Mar 2016.
- César B. Pérez and Claudia Reyes-Betanzo, Stress Reduction of Amorphous Silicon Deposited by PECVD, MRS Online Proceedings Library Archive, Volume 1812, 2016, imrc2015s6b-p006 doi: 10.1557/opl.2016.26, Published online by Cambridge University Press 02 Mar 2016
- José Herrera-Celis, Claudia Reyes-Betanzo, Abdu Orduña-Díaz, Ana Pérez-Coyotl, Armando Hernández-Flores, Janet Morales-Chávez and Arely Culebro-Gomez, Biofunctionalization Process of a-SiC:H Surfaces Applied to an Interdigitated Microelectrode Array to Detect Enterotoxigenic Escherichia coli, VII Latin American Congress on Biomedical Engineering CLAIB 2016, Bucaramanga, Colombia. October 26th - 28th of 2016.
- Jesús Martínez, Mario Moreno-Moreno, Pedro Rosales, Alfonso Torres, Roberto Ambrosio, Dulce Murias, "Study of the spin on dopant technique as alternative for the fabrication of c-Si solar cells", 43 IEEE Photovoltaic specialist conference, Portland Oregon, 2016.
- Pérez-Fajardo, D.M. Cortés-Hernández, R. Torres-Torres and Alfonso Torres-Jacome "Characterization of Transmission Lines in a Novel High-Frequency Laminate", VII Latin American Symposium on Circuits and Systems (LASCAS) 2016, pp. 391-394, ISBN 978-1-4673-7835-2/16/\$31.00©2016 IEEE, IEEE Catalog Number CFP16LAS-ART
- Carlos Ramón Báez Álvarez, Mónico Linares Aranda, Alfonso Torres-Jacome, Wilfrido Calleja Arriaga, and Javier de la Hidalga Wade "A Set of Test Structures for the

Development of a CMOS-MEMSTechnology”; 2016 13th International Conference on Electrical Engineering, Computing Science and Automatic Control (CCE), Mexico, City. Mexico. September 26-30, 2016

- Jesús Martínez, Mario Moreno, Pedro Rosales, Alfonso Torres-Jacome, Roberto Ambrosio, Dulce Murias “Study of the spin on dopant technique as alternative for the fabrication of c-Si solar cells”; 2016 IEEE 43rd Photovoltaic Specialists Conference (PVSC), Portland, OR, USA, 2016, pp. 2483-2486. doi: 10.1109/PVSC.2016.7750090.
- William W. Hernández-Montero, Carlos Zúñiga-Islas, Francisco Javier De la Hidalga-Wade, Wilfrido Calleja-Arriaga and Adrián Itzmoyotl-Toxqui, Synthesis of Nano/Meso-Structured Silicon Films by Plasma Deposition, MRS Proceedings / Volume 1817 / 2016, Materials Research Society 2016, DOI: <http://dx.doi.org/10.1557/opl.2016.51>.

Capítulos de libros, libros

- “Nano-Scaled Semiconductor Devices: Physics, Modelling, Characterisation, and Societal Impact” Edited and co-authored by Edmundo A. Gutiérrez-Domínguez. The Institution of Engineering and Technology (IET). ISBN 978-1-84919-930-8. England, May 2016. 464 pages. (<http://www.theiet.org/resources/books/circuits/nanoscaled.cfm>). El editor y co-autor de este libro es además autor y/o co-autor de 5 capítulos en este libro. Capítulo 1 “Introduction” by E. A. Gutiérrez-D. and Fernando Guarín.
- Capítulo 2 “Device physics, modeling, and technology for nano-scaled semiconductor devices”, by E. A. Gutiérrez-D., F. Gámiz, V. Sverdlov, S. Selberherr, and A. Torres-J.
- Capítulo 3 “Advanced device characterization techniques”, by E. A. Gutiérrez-D., Stewart E. Rauch, J. Molina, and E. A. Miranda.
- Capítulo 4 “The semiconductor device technology and its societal impact”, by Edmundo A. Gutiérrez-D., Fernando Guarín, and Pedro J. García-R.
- Capítulo 5 “The silicon era and beyond”, by Edmundo A. Gutiérrez-D, and Fernando J. Alarcón-Salazar, R. López-Estopier, E. Quiroga-González, A. Morales-Sánchez, J. Pedraza-Chávez, I. E. Zaldívar-Huerta and Mariano Aceves-Mijares “Chapter 7 Silicon-Rich Oxide Obtained by Low-Pressure Chemical Vapor Deposition to Develop Silicon Light Sources”. Chemical Vapor Deposition - Recent Advances and Applications in Optical, Solar Cells and Solid State Devices. Edited by Sudheer Neralla, <http://dx.doi.org/10.5772/61559>, ISBN 978-953-51-2573-0, (2016).
- Mario Moreno-Moreno, Roberto Ambrosio, Arturo Torres Sánchez, Alfonso Torres, Pedro Rosales, Adrián Itzmoyotl and Miguel Domínguez, “Amorphous, Polymorphous, and Microcrystalline Silicon Thin Films Deposited by Plasma at Low Temperatures”, In Book Crystalline and noncrystalline semiconductors, Ed. Intech, pp. 147-171, 2016.

Proyectos apoyados por CONACYT

- “Circuitos integrados analógicos para la mejora del desempeño de sistemas sensores portátiles”, CB-2015-01, no. proyecto 257985, 2015. Aprobado en Febrero de 2016. Responsable Dra. María Teresa Sanz Pascual