

PRODUCCIÓN CIENTÍFICA DEL INSTITUTO DE INVESTIGACIONES EN MATEMÁTICAS APLICADAS Y EN SISTEMAS

ARTÍCULOS EN REVISTAS ARBITRADAS 2015

1. **Acevedo, P., Vázquez, M., Durán, J. and Petrearce, R.** [A pulse generator based on an Arduino platform for ultrasonic applications](#). *Physics Procedia*. 2015, Vol. 70, p. 1096-1099.
2. **Acevedo, P., Vázquez, M., Durán, J. and Petrearce, R.** [The measurement of temperature gradients in a soft tissue phantom using PVDF arrays: A simulation case using the finite element method \(FEM\)](#). *Physics Procedia*. 2015, Vol. 70, p. 1100-1103.
3. **Acevedo, P. and Sánchez, I.** [Simulation and experimental analysis of mechanical crosstalk in an ultrasonic matrix array](#). *International Journal of Emerging Technology and Advanced Engineering*. 2015, Vol. 5, No. 10, p. 334-338.
4. **Acevedo, P. and Sánchez, I.** [Simulation of an ultrasonic transducer for medical applications using the finite element method](#). *Journal of Materials Science and Engineering B*. 2015, Vol. 5, No. 7-8, p. 293-297.
5. **Acevedo, P., García, F., Recuero, M. and Sánchez, I.** [Simulation of the crosstalk effect of a piezoelectric matrix array oscillating in the lateral mode](#). *International Journal of Physical Sciences*. 2015, Vol. 3, No. 2, p. 21-31.
6. **Álvarez, R. and Yutsis, V.** [The elusive Rivera-Cocos plate boundary: Not diffuse](#). *Geological Society of London*. 2015, *Special Publications*, Vol. 420, p. 1-21.
7. **Álvarez, R. and Yutsis, V.** [Southward migration of magmatic activity in the Colima volcanic complex, Mexico: An ongoing process](#). *International Journal of Geosciences*. 2015, Vol. 6, No. 9, p. 1077-1099.
8. **Aguilar, W. and Bribiesca, E.** [Symmetry detection in 3D chain coded discrete curves and trees](#). *Pattern Recognition*. 2015, Vol. 48, No. 4, p. 1420-1439.
9. **Aguilar, W. and Pérez, R.** [Dev E-R: A computational model of early cognitive development as a creative process](#). *Cognitive Systems Research*. 2015, Vol. 33, p. 17-41.
10. **Ballesteros, M., Faupin, J., Fröhlich, J. and Schubnel, B.** [Quantum electrodynamics of atomic resonances](#). *Communications in Mathematical Physics*. 2015, Vol. 337, p. 633-680.

11. **Ballesteros, M. and Weder, R.** [High-velocity estimates for Schrödinger operators in two dimensions: Long-range magnetic potentials and time-dependent inverse scattering](#). *Reviews in Mathematical Physics*. 2015, Vol. 27, No. 3, Art. No. 1550006, 54 p.
12. *Bach, V., Ballesteros, M. and Fröhlich, J.* [Continuous renormalization group analysis of spectral problems in quantum field theory](#). *Journal of Functional Analysis*. 2015, Vol. 268, No. 4, p. 749-823.
13. **Barberis, P. and Aguilar, O.** [Propagation of a probe pulse inside a Bose-Einstein condensate under conditions of electromagnetically induced transparency](#). *Physica Scripta*. 2015, Vol. 90, No. 6, Art. No. 068008, 6 p.
14. *Bienert, M. and Barberis, P.* [Optomechanical laser cooling with mechanical modulations](#). *Physical Review A*. 2015, Vol. 91, No. 2, Art. No. 023818, 9 p.
15. *Bolaños, M. and Barberis, P.* [Algebraic solution of the Lindblad equation for a collection of multilevel systems coupled to independent environments](#). *Journal of Physics A: Mathematical and Theoretical*. 2015, Vol. 48, No. 44, 15 p.
16. *Sabín, C., Barberis, P., Hernández, C., Mann, R.B. and Fuentes, I.* [Effects of three-body collisions in a two-mode Bose-Einstein condensate](#). *Journal of Mathematical Physics*. 2015, Vol. 56, No. 11, Art. No. 112102, 8 p.
17. **Benítez, H., Vázquez, M. and Durán, A.** [Sensor fusion based upon self organizing maps and local kalman filters for local fault diagnosis](#). *Latin American Applied Research*. 2015, Vol. 45, No. 4, 8 p.
18. *Arellano, M., Benítez, H. and Ortega, J.* [A consensus routing algorithm for mobile distributed systems](#). *International Journal of Distributed Sensor Networks*. 2015, Art. No. ID 510707, 8 p.
19. *Hermosillo, J.A. and Benítez, H.* [Global scheduling of confined tasks based on consensus](#). *IEEE Latin America Transactions*. 2015, Vol. 13, No. 3, p. 825-834.
20. **Bladt, M., Nielsen, B.F. and Samorodnitsky, G.** [Calculation of ruin probabilities for a dense class of heavy tailed distributions](#). *Scandinavian Actuarial Journal*. 2015, Vol. 2015, No. 7, p. 573-591.
21. *Lemus, E., Bribiesca, E. and Garduño, E.* [Surface trees-representation of boundary surfaces using a tree descriptor](#). *Journal of Visual Communication and Image Representation*. 2015, Vol. 31, p. 101-111.

22. Salazar, J.M. and **Bribiesca, E.** [Compression of three-dimensional surfaces by means of chain coding](#). *Optical Engineering*. 2015, Vol. 54, No. 12, Art. No. 124102, 12 p.
23. Figueroa, J.I., Savage, J., **Bribiesca, E.**, Escalante, B., Sucar, L.E. and Leder, R. [Compound Hidden Markov model for activity labelling](#). *International Journal of Intelligence Science*. 2015, Vol. 5, No. 5, p. 177-195.
24. **Castaños, L.O.** and **Weder, R.** [Equations of a moving mirror and the electromagnetic field](#). *Physica Scripta*. 2015, Vol. 90, No. 6, Art. No. 068011, 16 p.
25. Mendoza, M., **Contreras, A.** y **Gutiérrez, E.** [Inferencia Bayesiana y tablas de mortalidad en México](#). *Realidad, Datos y Espacio: Revista Internacional de Estadística y Geografía*. 2015, Vol. 6, No. 1, p. 4-17.
26. Caputo, J.G., **Cruz, G.** and **Panayotaros, P.** [Bistable reaction-diffusion on a network](#). *Journal of Physics A—Mathematical and Theoretical*. 2015, Vol. 48, No. 7, Art. No. 075102, 27 p.
27. **Del Río, R.** and **Silva, L.O.** [Spectral analysis for linear semi-infinite mass-spring systems](#). *Mathematische Nachrichten*. 2015, Vol. 288, No. 11-12, p. 1241-1253.
28. Espinosa, A.C., **Díaz, C.**, González, F.J., Val, R., Malvaez, V. and Mazari, M. [Drinking water quality in a Mexico City university community: perception and preferences](#). *EcoHealth*. 2015, Vol. 12, No. 1, p. 88-97.
29. **García-Naranjo, L.C.**, Suárez, P. and Vera, R. [Poisson structures on smooth 4-manifolds](#). *Letters in Mathematical Physics*. 2015, Vol. 105, No. 11, p. 1533-1550.
30. Bravo, A. and **García-Naranjo, L.C.** [The dynamics of an articulated \$n\$ -trailer vehicle](#). *Regular and Chaotic Dynamics*. 2015, Vol. 20, No. 5, p. 497-517.
31. Fassò, F., **García-Naranjo, L.C.** and Giacobbe, A. [Quasi-periodicity in relative quasi-periodic tori](#). *Nonlinearity*. 2015, Vol. 28, No. 11, p. 4281-4301.
32. Fedorov, Y.N., **García-Naranjo, L.C.** and Marrero, J.C. [Unimodularity and preservation of volumes in nonholonomic mechanics](#). *Journal of Nonlinear Science*. 2015, Vol. 25, No. 1, p. 203-246.
33. **García, F.**, **Solano, J.**, **Fuentes, M.** y **Rubio, E.** [Detección del sentido del flujo sanguíneo utilizando demodulación heterodina para un sistema doppler ultrasónico y su validación mediante simulación](#). *Revista Mexicana de Ingeniería Biomédica*. 2015, Vol. 36, No. 1, p. 23-31.

34. **García, F., Solano, J., Fuentes, M. y Rubio, E.** [Implementación de un demodulador heterodino para la discriminación del sentido del flujo sanguíneo en un detector doppler ultrasónico bi-direccional](#). *Revista Mexicana de Ingeniería Biomédica*. 2015, Vol. 36, No. 3, p. 249-256.
35. **Moock, V.M., Reyes, B., García, C., García, A., Arámbula, F. and Garduño, E.** [Frequency analysis for an extended photoacoustic transport model](#). *Optics Letters*. 2015, Vol. 40, No. 17, p. 4030-4033.
36. **Garro, B.A. and Vázquez, R.A.** [Designing artificial neural networks using particle swarm optimization algorithms](#). *Computational Intelligence and Neuroscience*. 2015, Vol. 2015, Art. No. 369298, 20 p.
37. **Mancera, E.A., Garro, B.A. and Rodríguez, K.** [Optimización mediante algoritmo de hormigas aplicado a la recolección de residuos sólidos en UNAM-CU](#). *Research in Computing Science*. 2015, Vol. 94, p. 163-177.
38. **Vázquez, R.A. and Garro, B.A.** [Training spiking neural models using artificial bee colony](#). *Computational Intelligence and Neuroscience*. 2015, Vol. 2015, Art. No. 947098, 14 p.
39. **Gershenson, C.** [Harnessing the complexity of education with information technology](#). *Complexity*. 2015, Vol. 20, No. 5, p. 13-16.
40. **Gershenson, C. and Helbing, D.** [When slower is faster](#). *Complexity*. 2015, Vol. 21, No. 2, p. 9-15.
41. **Gershenson, C.** [Requisite variety, autopoiesis, and self-organization](#). *Kybernetes*. 2015, Vol. 44, No. 6-7 Especial, p. 866-873.
42. **Amoretti, M. and Gershenson, C.** [Measuring the complexity of adaptive peer-to-peer systems](#). *Peer-to Peer Networking and Applications*. 2015, Vol. 2015, p. 1-16.
43. **Cocho, G., Flores, J., Gershenson, C., Pineda, C. and Sánchez, S.** [Rank diversity of languages: generic behavior in computational linguistics](#). *PLoS One*. 2015, Vol. 10, No. 4, Art. No. e0121898, 9 p.
44. **Febres, G., Jaffé, K. and Gershenson, C.** [Complexity measurement of natural and artificial languages](#). *Complexity*. 2015, Vol. 20, No. 6, p. 25-48.
45. **Murcio, R., Morphet, R., Gershenson, C. and Batty, M.** [Urban transfer entropy across scales](#). *PLoS One*. 2015, Vol. 10, No. 7, Art. No. e0133780, 19 p.

46. **Gómez, S., Ivorra, B., Glowinski, R. and Ramos, A.M.** [Modeling the Optimal Trajectory of a Skimmer Ship to clean Oil Spills in the Open Sea](#). *SPE Journal*. 2015, Art. No. SPE-174150-MS, 15 p.
47. **Mendoza, M. and Gutiérrez, E.** [Comment on article by Berger et al.](#) *Bayesian Analysis*. 2015, Vol. 10, No. 1, p. 227-231.
48. **Hevia, N., Rodríguez, P.I., Lamothe, P.J., Arellano, A., Bribiesca, E. and Alegría, M.A.** [Neuromorphometry of primary brain tumors by magnetic resonance imaging](#). *Journal of Medical Imaging*. 2015, Vol. 2, No. 2, Art. No. 024503, 9 p.
49. **Jiménez, J. and Escalante, J.C.** [#Yosoy132: A spontaneous Mexican student social movement](#). *ISA eSymposium for Sociology*. 2015, Vol. 5, No. 2, 9 p.
50. **Mena, R.H. and Walker, S.G.** [On the Bayesian mixture model and identifiability](#). *Journal of Computational and Graphical Statistics*. 2015, Vol. 24, No. 4, p. 1155-1169.
51. **Coen, A. and Mena, R.H.** [Ruin probabilities for Bayesian exchangeable claims processes](#). *Journal of Statistical Planning and Inference*. 2015, Vol. 166, Número Especial, p. 102-115.
52. **De Blasi, P., Favaro, S., Lijoi, A., Mena, R.H., Prünster, I. and Ruggiero, M.** [Are Gibbs-type priors the most natural generalization of the Dirichlet process?](#) *IEEE Transactions on Pattern Analysis and Machine Intelligence*. 2015, Vol. 37, No. 2, p. 212-229.
53. **Álvarez, M.T., Carvajal, M., Méndez, I. and Rojo, F.** [Free and DNA adducted aflatoxins in chronic liver diseases that predispose patients to hepatocellular carcinoma in Mexico](#). *Journal of Cancer Science & Therapy*. 2015, Vol. 7, No. 9, p. 274-282.
54. **Martínez, C.R., Martínez, S. y Méndez, I.** [Estímulos económicos, exigencias de trabajo y salud en académicos universitarios mexicanos](#). *Salud de los Trabajadores*. 2015, Vol. 23, No. 1, p. 5-18.
55. **Palomino, G., Martínez, J., Méndez, I., Cepeda, V., Barba, R. and Rodríguez, B.** [Nuclear genome size and cytotype analysis in *Agave parviflora* Torr. subsp. *flexiflora* Gentry \(Asparagales, Asparagaceae\)](#). *Caryologia*. 2015, Vol. 68, No. 3, p. 159-168.
56. **Rodríguez, S., De Cosío, T.G., Méndez, M.A., Tucker, K.L., Méndez, I., Hernández, S. and Popkin, B.M.** [A water and education provision intervention modifies the diet in overweight Mexican women in a randomized controlled trial](#). *Journal of Nutrition*. 2015, Vol. 145, No. 8, p. 1892-1899.

57. *Betancourt, O., Tapia, M. and Méndez, I.* [Decline of general intelligence in children exposed to manganese from mining contamination in puyango river basin, southern Ecuador](#). *EcoHealth*. 2015, Vol. 12, No. 3, p. 453-460.
58. *Minzoni, A.A.* *Sciberras, L.W., Smyth, N.F. and Worthy, A.L.* [Elliptical optical solitary waves in a finite nematic liquid crystal cell](#). *Physica D-Nonlinear Phenomena*. 2015, Vol. 301-302, p. 59-73.
59. *Assanto, G., Minzoni, A.A. and Smyth, N.F.* [On optical airy beams in integrable and non-integrable systems](#). *Wave Motion*. 2015, Vol. 52, p. 183-193.
60. *Ben, R.I., Cisneros, L., Minzoni, A.A. and Panayotaros, P.* [Localized solutions for a nonlocal discrete NLS equation](#). *Physics Letters A*. 2015, Vol. 379, No. 30-31, p. 1705-1714.
61. *Rosas, I.Y., Reyes, M.A.H., Minzoni, A.A. and Geffroy, E.* [Computer-controlled two-roll mill flow cell for the experimental study of particle and drop dynamics](#). *Experimental Thermal and Fluid Science*. 2015, Vol. 60, p. 54-65.
62. *Molino, E., García, F. and Benítez, H.* [Application of a time-scale local hurst exponent analysis to time series](#). *Digital Signal Processing*. 2015, Vol. 37, p. 92-99.
63. *Cardoso, J.G., Bernardello, R., Sánchez, J.A., Molino, E., Ruiz, A.C. and Cruzado, A.* [Accumulation of conservative substances in a sub-tropical coastal lagoon](#). *Estuarine, Coastal and Shelf Science*. 2015, Vol. 164, p. 1-9.
64. *Morales, L.B. and Velarde, C.* [On the classification of resolvable 2-\(12, 6, 5c\) designs](#). *Journal of Combinatorial Mathematics and Combinatorial Computing*. 2015, Vol. 93, p. 305-319.
65. *Martínez, D., Del Castillo, D., Olvera, A. and Calleja, R.* [Self-consistent chaotic transport in a high-dimensional mean-field Hamiltonian map model](#). *Qualitative Theory of Dynamical Systems*. 2015, Vol. 14, No. 2, p. 313-335.
66. *China, P., López, I., Vázquez, J.A., Osorio, R. and Lefranc, G.* [SVM and ANN application to multivariate pattern recognition using scatter data](#). *IEEE Latin America Transactions*. 2015, Vol. 13, No. 5, Art. No. 7112025, p. 1633-1639.
67. *Reyes, D., Millán, G., Osorio, R. and Lefranc, G.* [Mobile robot navigation assisted by GPS](#). *IEEE Latin America Transactions*. 2015, Vol. 13, No. 6, Art. No. 7164217, p. 1915-1920.

68. **Osorio, R.,** Vázquez, D., López, I., **Peña, M.,** Savage, J. and Lefranc, G. [System administration and monitoring moving objects using mobile devices](#). *IEEE Latin America Transactions*. 2015, Vol. 13, No. 6, Art. No. 7164220, p. 1934-1939.
69. **Osorio, R.,** López, I., Savage, J., **Peña, M.,** Lomas, V. and Lefranc, G. [Surveillance system mobile object using segmentation algorithms](#). *IEEE Latin America Transactions*. 2015, Vol. 13, No. 7, Art. No. 7273810, p. 2441-2446.
70. Mercado, A., **Padilla, P.** and Arroyo, A. [Objects and processes: Two notions for understanding biological information](#). *Journal of Theoretical Biology*. 2015, Vol. 380, p. 115-122.
71. Elizondo, R., **Padilla, P.** and **Bladt, M.** [Pricing american options using transition probabilities: A dynamical systems approach](#). *Open Journal of Statistics*. 2015, Vol. 5, No. 6, p. 525-542.
72. **Peña, M.,** Gómez, J.A., **Osorio, R.,** López, I., Lomas, V., **Gómez, H.** and Lefranc, G. [Fuzzy logic for omnidirectional mobile platform control displacement using FPGA and bluetooth communications devices](#). *IEEE Latin America Transactions*. 2015, Vol. 13, No. 6, Art. No. 7164216, p. 1907-1914.
73. **Pineda, L.A.,** Rodríguez, A., **Fuentes, G.,** **Rascón, C.A.** and **Meza, I.V.** [Concept and functional structure of a service robot](#). *International Journal of Advanced Robotic Systems*. 2015, Vol. 12, No. 6, p. 1-15.
74. **Rascón, C.A.,** **Meza, I.V.,** **Fuentes, G.,** Salinas, L. and **Pineda, L.A.** [Integration of the multi-DOA estimation functionality to human-robot interaction](#). *International Journal of Advanced Robotic Systems*. 2015, Vol. 12, Art. No. 8, p. 1-14.
75. **Rascón, C.A.,** **Fuentes, G.** and **Meza, I.V.** [Lightweight multi-DOA tracking of mobile speech sources](#). *EURASIP Journal on Audio, Speech, and Music Processing*. 2015, Vol. 2015, Art. No. 11, 16 p.
76. Invernizzi, N., Foladori, G., **Robles, E.,** Záyago, E., Arteag, E., Bagattolli, C., Carozza, T.J., Chiancone, A. and Urquijo, W. [Nanotechnology for social needs: contributions from Latin American research in the areas of health, energy and water](#). *Journal of Nanoparticle Research*. 2015, Vol. 17, No. 5, Art. No. 233, 19 p.
77. Foladori, G., Arteag, E., Záyago, E., Appelbaum, R., **Robles, E.,** Villa, L., Parker, R. and Leos, V. [Nanotechnology in Mexico: Key findings based on OECD criteria](#). *Minerva*. 2015, Vol. 53, No. 3, p. 279-301.

78. Contreras, L.E., Baquero, R., **Robles, E.** and Pérez, M.A. [Patrones de movilidad de los físicos mexicanos en el Sistema Nacional de Investigadores](#). *Interciencia*. 2015, Vol. 40, No. 8, p. 525-532.
79. Ortégón, P., Poot, A.C., Pérez, E. and **Rodríguez, K.** [Comparison of metabolic pathways in escherichia coli by using genetic algorithms](#). *Computational and Structural Biotechnology Journal*. 2015, Vol. 13, p. 277-285.
80. Arganis, M.L., Preciado, M. and **Rodríguez, K.** [Daily rainfall interpolation models obtained by means of genetic programming](#). *Revista Facultad de Ingeniería*. 2015, Vol. 1, No. 75, p. 189-201.
81. Mendoza, R., Silva, R., Jiménez, A., **Rodríguez, K.** and Sol, A. [Lake Zirahuen, Michoacan, Mexico: An approach to sustainable water resource management based on the chemical and bacterial assessment of its water body](#). *Sustainable Chemistry and Pharmacy*. 2015, Vol. 2, p. 1-11.
82. Fuentes, O.A., Arganis, M.L., Domínguez, R., Fuentes, G.E. and **Rodríguez, K.** [Maximización de la función de verosimilitud de distribuciones de probabilidad usando algoritmos genéticos](#). *Ingeniería del Agua*. 2015, Vol. 19, No. 1, p. 17-29.
83. Martínez, M.A., **Rodríguez, K.** and Pérez, E. [The lifestyle of prokaryotic organisms influences the repertoire of promiscuous enzymes](#). *Proteins: Structure, Function, and Bioinformatics*. 2015, Vol. 83, No. 9, p. 1625-1631.
84. Poot, A.C., **Rodríguez, K.** and Pérez, E. [The alignment of enzymatic steps reveals similar metabolic pathways and probable recruitment events in *Gammaproteobacteria*](#). *BMC Genomics*. 2015, Vol. 16, No. 957, 14 p.
85. Weinstein, N., Ortiz, E., Muñoz, S., **Rosenblueth, D.A.**, Álvaerz-Buylla, E.R. and Mendoza, L. [A model of the regulatory network involved in the control of the cell cycle and cell differentiation in the *Caenorhabditis elegans* vulva](#). *BMC Bioinformatics*. 2015, Vol. 16, No. 81, 21 p.
86. Góngora, P.A. and **Rosenblueth, D.A.** [A symbolic shortest path algorithm for computing subgame-perfect nash equilibria](#). *International Journal of Applied Mathematics and Computer Science*. 2015, Vol. 25, No, 3, p. 577-596.
87. **Rosenblueth, J.F.** [Modified critical directions for inequality control constraints](#). *WSEAS Transactions on Systems and Control*. 2015, Vol. 10, p. 215-227.
88. **Rosenblueth, J.F.** [Strong and weak augmentability in calculus of variations](#). *WSEAS Transactions on Mathematics*. 2015, Vol. 14, p. 106-115.

89. Gavilán, J.M., Carvajal, M., Rojo, F. and **Ruiz-Velasco, S.** [Aflatoxins in pistachios consumed in Mexico](#). *Natural Products Chemistry & Research*. 2015, Vol. 3, No. 3, Art. No. 100074, p. 1-6.
90. Adaya, J., Carvajal, M., Rojo, F. and **Ruiz-Velasco, S.** [Aflatoxins in Walnut \(*Juqlans regia* L.\), Pecan \(*Carya illinoensis* \(Wangenh.\) K. Koch\) and Cashew \(*Anacardium occidentale* L.\) Nuts of Mexico](#). *Pharmaceutica Analytica Acta*. 2015, Vol. 6, No. 2, Art. No. 1000338, p. 3-10.
91. Moctezuma, M.G., Carvajal, M., Espinosa, J.J., Gonsebatt, M.E., Rojo, F., Castillo, P., Pérez, I. and **Ruiz-Velasco, S.** [Role of pH in the mutagenicity of aflatoxin B1 in maize tortillas during in vitro human digestion model](#). *Journal of Food & Nutritional Disorders*. 2015, Vol. 4, No. 3, Art. No. 1000174, 10 p.
92. Moreno, A., García, F., **Ruiz-Velasco, S.** and Medina-Mora, M.E. [Assessment of depressive symptoms in severe smokers with minimal-mild depressive symptomatology receiving pre-smoking abstinence for integrated treatment: a randomized clinical trial](#). *Salud Mental*. 2015, Vol. 38, No. 6, p. 433-439.
93. **Sabina, F.J.**, Gandarrilla, C.A., Otero, J.A., Rodríguez, R., Bravo, J., Guinovart, R. and Valdiviezo, O. [Dynamic homogenization for composites with embedded multioriented ellipsoidal inclusions](#). *International Journal of Solids and Structures*. 2015, Vol. 69-70, p. 121-130.
94. Argatov, I.I. and **Sabina, F.J.** [Small-scale indentation of a hemispherical inhomogeneity in an elastic half-space](#). *European Journal of Mechanics A-Solids*. 2015, Vol. 53, p. 151-162.
95. Bravo, J., Sixto, L.M., Brenner, R., Guinovart, R., Pérez, L.D., Rodríguez, R. and **Sabina, F.J.** [Temperature-related effective properties and exact relations for thermo-magneto-electro-elastic fibrous composites](#). *Computers & Mathematics with Applications*. 2015, Vol. 69, No. 9, p. 980-996.
96. Sixto, L.M., Bravo, J., Guinovart, R., Pérez, L.D., Rodríguez, R. and **Sabina, F.J.** [Exact relations for the anti-plane effective magneto-electro-elastic coefficients of two phase fibrous composites](#). *Mechanics Research Communications*. 2015, Vol. 70, p. 42-48.
97. **Sánchez, I.** [Crosstalk in ultrasonic transducers, a first look](#). *IEEE Latin America Transactions*. 2015, Vol. 13, No. 3, p. 589-598.
98. **Silva, L.O.** and Toloza, J.H. [On dB spaces with nondensely defined multiplication operator and the existence of zero-free functions](#). *Journal of Mathematical Analysis and Applications*. 2015, Vol. 421, No. 2, p. 996-1005.

99. **Silva, L.O.**, Teschl, G. and Toloza, J.H. [Singular Schrödinger operators as self-adjoint extensions of \$N\$ -entire operators](#). *Proceedings of the American Mathematical Society*. 2015, Vol. 143, No. 5, p. 2103-2115.
100. Kudryavtsev, M., Palafox, S. and **Silva, L.O.** [On a linear interpolation problem for \$n\$ -dimensional vector polynomials](#). *Journal of Approximation Theory*. 2015, Vol. 199, p. 45-62.
101. Hernández, E. and **Siqueiros, J.M.** [Mechanistic-enriched models: Integrating transcription factor networks and metabolic deregulation in cancer](#). *Theoretical Biology and Medical Modelling*. 2015, Vol. 12, No. 16, 15 p.
102. Yalcin, G.C., **Velarde, C.** and Robledo, A. [Entropies for severely contracted configuration space](#). *Heliyon*. 2015, Vol. 1, No. 2015, Art. No. e00045, 13 p.
103. **Weder, R.** [Scattering theory for the matrix Schrödinger operator on the half line with general boundary conditions](#). *Journal of Mathematical Physics*. 2015, Vol. 56, No. 9, Art. No. 092103, 24 p.
104. Naumkin, I. and **Weder, R.** [High-energy and smoothness asymptotic expansion of the scattering amplitude for the Dirac equation and application](#). *Mathematical Methods in the Applied Sciences*. 2015, Vol. 38, No. 12, p. 2427-2465.