

Artículos publicados en revistas indizadas 2022

Publicados

1. **Álvarez, E.¹, Murillo, R. and Plaza, R.G.** Spectral instability of small-amplitude periodic waves for hyperbolic non Fickian diffusion advection models with logistic source. *Mathematical Modelling Natural Phenomena*. 2022, Vol. 17, Art. No. 13, 25 p.
2. **Ballesteros, M.A., Iniesta, D.A., Naumkin, I. and Peña, C.** Wave and scattering operators for the nonlinear Klein-Gordon equation on a quarter-plane. *Journal of Differential Equations*. 2022, Vol. 321, p. 66-98.
3. **Ballesteros, M.A., Franco, G., Garro, G. and Schulz-Baldes, H.** Band edge limit of the scattering matrix for quasi-one-dimensional discrete Schrödinger operators. *Complex Analysis and Operator Theory*. 2022, Vol. 16, No. 2, 23 p.
4. **Ballesteros, M.A. and Garro, G.** A model and a numerical scheme for the description of distribution and abundance of individuals. *Journal of Mathematical Biology*. 2022, Vol. 85, No. 4, Art. No. 31.
5. Rodríguez, M.A., DiMario, M.T., **Barberis, P.** and Becerra, F.E. Determination of the asymptotic limits of adaptive photon counting measurements for coherent-state optical phase estimation. *NPJ Quantum Information*. 2022, Vol. 8, No. 1, Art. No. 94.
6. Sifuentes, J., Angulo, O., de Anda, G., Díaz de León, J.L., Hernández, E., **Benítez, H.**, Herrera, L.A., López, O., Revuelta, A., Rosales, A.R., Suárez, M., Kershenobich, D. and Ruiz, R. Probability of hospitalisation and death among COVID-19 patients with comorbidity during outbreaks occurring in Mexico City. *Journal of Global Health*. 2022, Vol. 12, Art. No. 05038, 13 p.
7. Caballero, R.O., **Bravo, J.** and **Ríos, L.F.** Effective thermo-magneto-electro-elastic properties of laminates with non-uniform imperfect contact: delamination and product properties. *Acta Mechanica*. 2022, Vol. 233, p.137-155.
8. Aguiar, A.R., **Bravo, J.** and Rocha, L.A. Analysis of a cylindrically orthotropic disk using a regular perturbation method. *Archive of Applied Mechanics*. 2022, Vol. 92, p. 1983-1996.
9. **Bravo, J. and López, L.F.** Variational formulation for fractional hyperbolic problems in the theory of viscoelasticity. *Zeitschrift fur Angewandte Mathematik und Physik*. 2022, Vol. 73, no. 5, Art. No. 199, 20 p.

¹ Becario Posdoctoral del Departamento de Física Matemática.

10. Pérez, M.T., **Bravo, J.**, Mansilla, R. and Caballero, R.O. Discrete Gompertz and generalized logistic models for early monitoring of the COVID-19 pandemic in Cuba. *Nova Scientia*. 2022, Vol. 14, No. 29, 8 p.
11. **Calderón, A.²**, Gómez, E., Yutsis, V., Guevara, R. and Gómez, M. How close can we get to the classical magnetotelluric sounding? *Journal of Applied Geophysics*. 2022, Vol. 203, Art. 104665.
12. **Calleja, R.C.**, Celletti, A., Gimeno, J. and de la Llave, R. KAM quasi-periodic tori for the dissipative spin-orbit problem. *Communications in Nonlinear Science and Numerical Simulation*. 2022, Vol. 106, Art. No. 106099.
13. **Calleja, R.C.**, Celletti, A. and de la Llave, R. KAM quasi-periodic solutions for the dissipative standard map. *Communications in Nonlinear Science and Numerical Simulation*. 2022, Vol. 106, Art. No. 106111.
14. **Calleja, R.C.** and de la Llave, R. Efficient and accurate KAM tori construction for the dissipative spin-orbit problem using a map reduction. *Journal of Nonlinear Science*. 2022, Vol. 32, Art. No. 4.
15. **Cortés, Y.** and **Padilla, P.** A variational approach to morphogenesis: Recovering spatial phenotypical features from epigenetic landscapes. *Bulletin of Mathematical Biology*. 2022, Vol. 84, No. 3, Art. No. 33.
16. Pérez, R., **Cortés, Y.** and **Padilla, P.** Epigenetic forest and flower morphogenesis. *Computational Biology and Chemistry*. 2022, Vol. 98, Art. No. 107667.
17. Mongua, N., Rodríguez, M., de la Rosa, D., Jiménez, M.E., Castañeda, M.L., Miranda, G., **Cruz, G.**, Ferreira, E., Ferreyra, L., Delgado, G., Cruz, A., Pérez, R., Ponce de León, S. and García, L. Knowledge, attitudes, perceptions, and COVID-19 hesitancy in a large public university in Mexico city during the early vaccination rollout. *BMC Public Health*. 2022, Vol. 22, No. 1, No. Art. 1853, 8 p.
18. Reyes, M.E., Fonseca, A.J. y **Cruz, C.R.³** Consideraciones en el diseño de robots para la atención médica en el mundo post COVID-19. *CULCYT Cultura Científica y Tecnológica*. 2022, Vol. 19, No. 1 enero-abril, p. 1-17.
19. Astaburuaga, M.A., Cortés, V.H., Fernández, C. and **del Río, R.R.** Singular rank one perturbations. *Journal of Mathematical Physics*. 2022, Vol. 63, No. 2, Art. No. 023502.
20. Madrigal, M.C., Botero, E. and **Díaz, C.** Assessment of the regional subsidence in the lacustrine zone of Mexico City using a geostatistical model. *Environmental Earth Sciences*. 2022, Vol. 81, No. 15, Art. No. 381.
21. Juan, P., Braulio, M., **Díaz, C.**, Bovea, M.D. and Serra, L. Bayesian and network models with covariate effects for predicting heating energy demand. *Spatial and Spatio-temporal Epidemiology*. 2022, Vol. 43, Art. No. 100547.
22. **Díaz, C.** and Juan, P. Modeling the spatial evolution wildfires using random spread process. *Environmetrics*. 2022, Vol. 33, No. 8, Art No. e2774.

² Becario Posdoctoral del Departamento de Física Matemática.

³ Investigador Cátedra CONACYT del Departamento de Ciencias de la Computación.

23. **Díaz, M.A.**, Jaramillo, A. and Pardo, J.C. **Fluctuations for matrix-valued Gaussian processes**. *Annales de l'institut Henri Poincare (B) Probability and Statistics*. 2022, Vol. 58, No. 4, p. 2216-2249.
24. Sypherd, T., **Díaz, M.A.**, Cava, J.K., Dasarathy, G., Kairouz, P. and Sankar, L. **A tunable loss function for robust classification: Calibration, landscape, and generalization**. *IEEE Transactions on Information Theory*. 2022, Vol. 63, No. 9, p. 6021-6051.
25. **Eslava, L.C.** **Depth of vertices with high degree in random recursive trees**. *ALEA, Latin American Journal of Probability and Mathematical Statistics*. 2022, Vol. 19, No. 1, p. 839-857.
26. **Eslava, L.C.**, Skerman, F. and Penington, S. **Survival for a Galton-Watson tree with cousin mergers**. *Procedia Computer Science*. 2021, Vol. 195, p. 445-452. (Available online 5 January 2022, and Version of Record 5 January 2022).
27. **Farrera, A.M.⁴** and **Ramos, G.** **Collective rhythm as an emergent property during human social coordination**. *Frontiers in Psychology*. 2022, Vol. 12, Art. No. 772262.
28. **Farrera, A.M.⁴** **Formal models for the study of the relationship between fluctuating asymmetry and fitness in humans**. *American Journal of Biological Anthropology*. 2022, Vol. 179, No. 1, p. 73-84.
29. **Folino, R., López, L.F.** and **Plaza, R.G.** **Long-time behavior of solutions to the generalized Allen-Cahn model with degenerate diffusivity**. *Nonlinear Differential Equations and Applications NoDEA*. 2022, Vol. 29, Art. No. 45.
30. **Folino, R., López, L.F.** and Strani, M. **On a generalized Cahn-Hilliard model with p -Laplacian**. *Advances in Differential Equations*. 2022, Vol. 27, No. 9/10, p. 647-682.
31. **Folino, R., Plaza, R.G.** and **Zhelyazov, D.⁵** **Spectral stability of small-amplitude dispersive shocks in quantum hydrodynamics with viscosity**. *Communications on Pure and Applied Analysis*. 2022, Vol. 21, No. 12, p. 4019-4040.
32. Aristizabal, V.A., Guevara, J.M., Sauza, A., Pendás, A.M., **Fuentes, G.** and Rocha, T. **Computation of photovoltaic and stability properties of hybrid organic-inorganic perovskites via convolutional neural networks**. *Theoretical Chemistry Accounts*. 2022, Vol. 141, No. 4, Art. No. 19.
33. Cano, R., Lenz, A.R., **Galán, E.**, Ramírez, J.H. and **Pérez, E.** **Gene regulatory network inference and gene module regulating virulence in *fusarium oxysporum***. *Frontiers Microbiology*. 2022, Vol. 13, Art. No. 861528.
34. **Galán, E.**, Gómez, M.C. and **Pérez, E.** **A landscape of gene regulation in the parasitic amoebaezoa *Entamoeba spp.*** *PLoS One*. 2022, Vol. 17, No. 8, Art. No. e0271640.
35. Constantineau, K., **García, C.** and Lessard, J.-P. **Spatial relative equilibria and periodic solutions of the coulomb ($n+1$)-body problem**. *Qualitative Theory of Dynamical Systems*. 2022, Vol. 21, No. 1 Art. No. 3.

⁴ Becaria Posdoctoral del Departamento de Modelación Matemática de Sistemas Sociales que causó baja en marzo de 2022.

⁵ Becario Posdoctoral del Departamento de Matemáticas y Mecánica.

36. Bengochea, A., **García, C.**, Pérez, E. and Roldán, P. *Continuation of relative equilibria in the n-body problem to spaces of constant curvature*. *Journal of Differential Equations*. 2022, Vol. 307, p. 137-159.
37. Eze, I., **García, C.**, Krawcewicz, W. and Lv, Y. *Subharmonic solutions in reversible non-autonomous differential equations*. *Nonlinear Analysis-Theory Methods & Applications*. 2022, Vol. 216, Art. No. 112675.
38. **García, C.** and **García-Naranjo, L.C.**⁶ *Platonic solids and symmetric solutions of the N-vortex problem on the sphere*. *Journal of Nonlinear Science*. 2022, Vol. 32, No. 3, Art. No. 39.
39. Fontaine, M. and **García, C.** *Braids of the N-body problem II: carousel solutions by cabling central configurations*. *Calculus of Variations and Partial Differential Equations*. 2022, Vol. 61, No. 4, Art. No. 134.
40. Barrera, C., Bengochea, A. and **García, C.** *Comet and moon solutions in the time-dependent restricted (n+1)-body problem*. *Journal of Dynamics and Differential Equations*. 2022, Vol. 34, No. 2, p. 1187-1207.
41. **García, S.I.** *La sociología de Pierre Bourdieu: una opción para cuestionar las evidencias empíricas*. Tla-Melaua. *Revista de Ciencias Sociales*. 2022, Nueva época año 16, Suplemento de Verano, p. 56-83.
42. Febres, G.L. and **Gershenson, C.** *A deterministic-statistical Hybrid Forecast model: The future of the COVID-19 contagious process in several regions of Mexico*. *Systems*. 2022, Vol. 10, No. 5, Art. No. 138.
43. Iñiguez, G., Pineda, C., **Gershenson, C.** and Barabási, A.L. *Dynamics of ranking*. *Nature Communications*. 2022, Vol. 13, No. 1, Art. No. 1646.
44. Rivera, P.J., **Gershenson, C.**, Sánchez, M.F. and Kanaan, S. *Reinforcement learning with probabilistic boolean network models of smart grid devices*. *Complexity*. 2022, Vol. 2022, Art. No. 3652441, 15 p.
45. Lazarus, J.V., Romero, D., Kopka, C.J., **Gershenson, C.** et al. *A multinational Delphi consensus to end the COVID-19 public health threat*. *Nature*. 2022, Vo. 611, p. 332–345.
46. García, A., Govezensky, T., **Gershenson, C.**, Naumis, G.G. and Barrio, R.A. *Extracting real social interactions from a debate of COVID-19 policies on Twitter: The case of Mexico*. *Advances in Complex Systems*. 2022, Vol. 24, No. 7&8, Art. No. 2150017.
47. Casillas, R., **Gómez, H.M.**, Lomas, V.M. and Ramos, O. *Automatic fact checking using an interpretable Bert-based architecture on COVID-19 claims*. *Applied Sciences*. 2022, Vol. 12, No. 20, Art. No. 10644.
48. Vázquez, S., Somodevilla, M., López, R.L. and **Gómez, H.M.** *Creating a corpus of historical documents for emotions identification*. *Journal of Intelligent & Fuzzy Systems*. 2022, Vol. 42, No. 5, p. 4779-4787.

⁶ Investigador del Departamento de Matemáticas y Mecánica que causó baja en enero de 2021.

49. Embarcadero, D., **Gómez, H.M.**, Embarcadero, A. and Sierra, G. *Graph-based siamese network for authorship verification*. Mathematics. 2022, Vol. 10, No. 2, Art. No. 277, 24 p.
50. Ameer, I., Sidorov, G., **Gómez, H.M.** and Nawab, R.M.A. *Multi-label emotion classification on code-mixed text: data and methods*. 2022, IEEE Access, Vol. 10. P. 8779-8789.
51. Bel-Enguix, G., Sierra, G., **Gómez, H.M.**, Torres, J.M., Ortiz, J.G. and Vásquez, J. *Overview of PAR-MEX at Iberlef 2022: Paraphrase detection in spanish shared task*. Procesamiento de Lenguaje Natural. 2022, Vol. 69, p. 255-263.
52. Bel-Enguix, G., **Gómez, H.M.**, Mendoza, K., Sidorov, G. and Vásquez, J. *La #felicidad en Twitter: ¿qué representa realmente? #happiness in Twitter: What does it really represent?* LinguaMÁTICA. 2022, Vol. 14, No. 1, p. 13-15.
53. Sierra, G., Hernández, T., **Gómez, H.M.** and Bel-Enguix, G. *A case study in authorship attribution: The Mondrigo*. Journal of Intelligent & Fuzzy Systems. 2022, Vol. 42, No. 5, p. 4473-4480.
54. Ortiz, J.G., Bel-Enguix, G. and **Gómez, H.M.** *Sentence-CROBI: A simple cross-bi-encoder-based neural network architecture for paraphrase identification*. Mathematics. 2022, Vol. 10, No. 19, Art. No. 3578.
55. Nieto, L. and **Gutiérrez, E.A.** *General dependence structures for some models based on exponential families with quadratic variance functions*. Test. 2022, Vol. 31, p. 699-716.
56. **Hernández, C.I.** and Schütze, O. *A bounded archiver for Hausdorff approximations of the Pareto front for multi-objective evolutionary algorithms*. Mathematical and Computational Applications. 2022, Vol. 27, No. 3, Art. No. 48.
57. Morales, R., **Hernández, N.S.**, Cruz, C.R.⁷, Cruz, V.D. and **Pineda, L.A.** *Entropic associative memory for manuscript symbols*. PloS One. 2022, Vol.17, No. 18, Art. No. e0272386.
58. **Hevia, N.**, **Pérez, J.L.**, **Neme, J.A.** and Haro, P. *Machine learning-based feature selection and classification for the experimental diagnosis of trypanosoma cruzi*. Electronics. 2022, Vol. 11, No. 5, Art. No. 785.
59. **Lomas, V.M.**, Silva, R., **Neme, J.A.** and **Peña, J.M.** *A multiview recognition method of predefined objects for robot assembly using deep learning and its implementation on an FPGA*. Electronics. 2022, Vol. 11, No. 5, Art. No. 696.
60. Leyva, J.F., **López, L.F.** and **Plaza, R.G.** *Spectral stability of monotone traveling fronts for reaction diffusion-degenerate Nagumo equations*. Indiana University Mathematics Journal. 2022, Vol. 71, No. 6, p. 2335-2376.
61. **Madariaga, A.**, Naveja, J.J., Becerra, A., Campillo, J.A., Hernández, R., Jácome, R., Lazcano, A. and **Martínez, K.** *Subtle structural differences of nucleotide analogs may impact SARS-CoV-2 RNA-dependent RNA polymerase and exoribonuclease activity*. Computational and Structural Biotechnology Journal. 2022, Vol. 20, p. 5181-5192.

⁷ Investigador Cátedra CONACYT del Departamento de Ciencias de la Computación.

62. Pérez, A., Díaz, M., Castillejos, E.V., Pérez, A., Montaño, Y., Rivero, I., Torres, R., González, M., Rodríguez, R., Gutiérrez, J.A., **Madariaga, A.** and Mata, R. *Protein tyrosine phosphatase 1B inhibitory activity of compounds from Justicia spicigera (Acanthaceae)*. *Phytochemistry*. 2022, Vol. 203, Art. No. 113410.
63. Shanmugasundaram, V., Bajorath, J., Christoffersen, R.E., Petke, J.D., Howe, W.J., Johnson, M.A., Agrafiotis, D.K., Lee, P., Kuhn, L.A., Goodwin, J.T., Holloway, M.K., Doman, T.N., Walters, W.P., Schreyer, S., Medina, J.L., **Martínez, K.** and Restifo, L.L. *Epilogue to the Gerald Maggiora Festschrift: a tribute to an exemplary mentor, colleague, collaborator, and innovator*. *Journal of Comput-Aided Molecular Design*. 2022, Vol. 36, p. 623–638.
64. Guillén, F., Ávila, L.A., Rodríguez, Z. and **Martínez, M.A.** *Insights into coastal microbial antibiotic resistome through a meta-transcriptomic approach in Yucatan*. *Frontiers in Microbiology*. 2022, Vol. 13, Art. No. 972267.
65. De Blasi, P., **Mena, R.H.** and Prünster, I. *Asymptotic behavior of the number of distinct values in a sample from the geometric stick-breaking process*. *Annals of the Institute of Statistical Mathematics*. 2022, Vol. 74, p. 143-165.
66. Ayala, D., Jofré, L., Gutiérrez, L. and **Mena, R.H.** *On a Dirichlet process mixture representation of phase-type distributions*. *Bayesian Analysis*. 2022, Vol. 17, No. 3, p. 765-790.
67. Cervera, A.A. and **Méndez, P.E.** *U19-Net: a deep learning approach for obstacle detection in self-driving cars*. *Soft Computing*. 2022, Vol. 22, p. 5195-5207.
68. **Méndez, P.E.**, Cruz, E., Jiménez, M., Gómez, J.L., Canto, M., **Sánchez, I.**, May, O. and Bassam, A. *IoT system for the continuous electrical and environmental monitoring into mexican social housing evaluated under tropical climate conditions*. *Journal of Sensors*. 2022, Vol. 2022, Art. No. 5508713, 20 p.
69. Fuentes, M., Sánchez, E., **Meza, I.V.** and Loeza, C.I. *Neurodegenerative diseases categorization by applying the automatic model selection and hyperparameter optimization method*. *Journal of Intelligent & Fuzzy Systems*. 2022, Vol. 42, No. 5, p. 4759-4767.
70. Kann, K., Ebrahimi, A., Mager, M., Oncevay, A., Ortega, J.E., Ríos, A., Fan, A., Gutiérrez, X., Chiruzzo, L., Giménez, G.A., Ramos, R., **Meza, I.V.**, Mager, E., Chaudhary, V., Neubig, G., Palmer, A., Coto, R. and Vu, N.T. *AmericasNLI: Machine translation and natural language inference systems for Indigenous languages of the Americas*. *Frontiers in Artificial Intelligence*. 2022, Vol. 5, Art. No. 995667.
71. Cruz, L., Antonio, J., **Meza, I.V.**, López, E. y Gil, L. *Sistema intérprete automático neuronal Mazahua del norte del Estado de México a Español*. Número especial de la Revista Aristas: *Investigación Básica y Aplicada*. 2022, Vol. 8, No. 17. p. 241-246.
72. Janzen, T. and **Miró, V.S.F.**⁸ *Estimating the time since admixture from phased and unphased molecular data*. *Molecular Ecology Resources*. 2022, Vol. 22, p. 908-926.
73. González, A., **Miró, V.S.F.**⁸ and **Siri-Jégousse, A.** *The symmetric coalescent and Wright-Fisher models with bottlenecks*. *Annals of Applied Probability*. 2022, Vol. 32, No. 1, p. 235-268.

⁸ Becaria Posdoctoral del Departamento de Probabilidad y Estadística que causó baja en octubre de 2020.

74. Hernández, J.C.R., **Miró, V.S.F.⁸**, Siri-Jégousse, A., Palau, S., Peña, R. and González-Casanova, A. Segregational instability of multicopy plasmids: A population genetics approach. *Ecology and Evolution*. 2022, Vol. 12, No. 12, Art. No. e9469, 15 p.
75. Aguilera, A.A., Brena, R.F., **Molino, E.** and Galván, C.E. Facial expression recognition from multi-perspective visual inputs and soft voting. *Sensors*. 2022, Vol. 22, No. 11, Art. No. 4206.
76. Giordano, C.M. and **Olvera, A.** Asymptotic study of the Levitron dynamics. *European Physical Journal Special Topics*. 2022, Vol. 231, p. 309-318.
77. Giordano, C.M. and **Olvera, A.** Mechanical stabilization of the dissipative model for the Levitron: bifurcation study and early prediction of flight times. *European Physical Journal Special Topics*. 2022, Vol. 231, p. 329-339.
78. Lefranc, G., López, I., **Osorio, R.V.** and **Peña, J.M.** Impact of Cobots on automation. 9th International Conference on Information Technology and Quantitative Management (ITQM 2022), Procedia Computer Science. 2022, Vol. 214, No. C, p. 71-78.
79. Peñaloza, I. and **Padilla, P.** A pricing method in a constrained market with differential informational frameworks. *Computational Economics*. 2022, Vol. 60, p. 1055-1100.
80. Borjon, S., Escalante, J. and **Padilla, P.** Newtonian gravity and MOND: a fractional Fourier approach. *Indian J Phys*. 2022, Vol. 96, p. 3405–3411.
81. Grant, B., Knights, F., **Padilla, P.** and Tidhar, D. Network-theoretic analysis and the exploration of stylistic development in Haydn's string quartets. *Journal of Mathematics and Music*. 2022, Vol. 16, No. 1, p. 18-28.
82. Knights, F., Rodriguez, M. and **Padilla, P.** O splendor gloriae: Taverner or tye? *Early Music*. 2022, Vol. 49, No. 4, p. 565-577.
83. Sánchez, M. y **Padilla, P.** La artificación de la ciencia o la búsqueda de la horizontalidad en las relaciones arte-ciencia. *Reflexiones Marginales*. 2022, No. 71, formato digital.
84. **Panayotaros, P.** Equilibria of a discrete Landau-de Gennes theory for nematic liquid crystals. *The European Physical Journal Special Topics*. 2022, Vol. 231, p. 297-307.
85. **Panayotaros, P.** and Vargas, R.M. Water wave problem with inclined walls. *European Journal of Mechanics – B/Fluids*. 2022, Vol. 96, p. 108-121.
86. Barreto, M.A., **Pérez, J.L.**, Herr, H.M. and Huegel, J.C. ARACAM: A RGB-D Multi-view photogrammetry system for lower limb 3D reconstruction applications. *Sensors*. 2022, Vol. 22, No. 7, Art. No. 2443.
87. Barreto, M.A., Cuan, E., **Pérez, J.L.** and Huegel, J.C. The use of conformal lattice metamaterials for relieving stress in lower limb sockets: A numerical and exploratory study. *Proceedings of the Institution of Mechanical Engineers Part H-Journal of Engineering in Medicine*. 2022, Vol. 236, No. 11, p. 1635-1645.

88. Lenz, A.R., Balbinot, E., Souza, N., Pessi, F., Lenz, P., Camassola, M., Pérez, E., de Ávila, S. and Pinheiro, A.J. Analysis of carbohydrate-active enzymes and sugar transporters in *penicillium echinulatum*: A genome-wide comparative study of the fungal lignocellulolytic system. *Gene*. 2022, Vol. 822, Art. No. 146345.
89. Sganzerla, G., Pérez, E., Sarkar, S., Kumar, A. and de Ávila, S. Machine learning and statistics shape a novel path in archaeal promoter annotation. *BMC Bioinformatics*. 2022, Vol. 23, Art. No. 171.
90. Soberanes, C.V., Castillo, A., Pérez, E. and Galán, E. Construction and analysis of gene co-expression network in the pathogenic fungus *Ustilago maydis*. *Frontiers in Microbiology*. 2022, Vol. 13, Art. No. 1048694.
91. Armenta, D., Díaz de León, C., Armenta, A. and Pérez, E. A bibliometric analysis of mexican bioinformatics: A portrait of actors, structure, and dynamics. *Biology*. 2022, Vol. 11, No. 1, Art. No. 131.
92. Romero, L., Contreras, S., Lira, M., Martín, A.J.M. and Pérez, E. Homology-based reconstruction of regulatory networks for bacterial and archaeal genomes. *Frontiers in Microbiology*. 2022, Vol. 13, Art. No. 923105.
93. Pineda, L.A. and Morales, R. Weighted entropic associative memory and phonetic learning. *Scientific Reports*. 2022, Vol. 12, Art. No. 16703.
94. Angulo, J. and Plaza, R.G. Unstable kink and anti-kink profile for the sine-Gordon equation on a Y-junction graph. *Mathematische Zeitschrift*. 2022, Vol 300, No. 3, p. 2885-2915.
95. Plaza, R.G. and Vallejo, F. Stability of classical shock fronts for compressible hyperelastic materials of hadamard type. *Archive for Rational Mechanics and Analysis*. 2022, Vol. 243, p. 943-1017.
96. Plaza, R.G. and Valdovinos, J.M. Dissipative structure of one-dimensional isothermal compressible fluids of Korteweg type. *Journal of Mathematical Analysis and Applications*. 2022, Vol. 514, No. 2, Art. No. 126336.
97. Briseño, M., Sosa, J.R., Ramos, G. and Lemasson, A. Flexible use of contact calls in a species with high fission-fusion dynamics. *Philosophical Transactions of the Royal Society B. Biological Sciences*. 2022, Vol. 377, No. 1860, Art. No. 20210309.
98. Eppley, T.M., Hoeks, S., Chapman, C.A., Ramos, G. et al. Factors influencing terrestriality in primates of the Americas and Madagascar. *Proceedings of the National Academy of Sciences of the United States of America*. 2022, Vol. 119, No. 42, Art. No. e2121105119.
99. Petrearce, R., Rascón, C.A. and Sandoval, G.E. Design and implementation of an acoustic wave measuring system based on a fiber optic sensor using multimodal interference. *Journal and Electromagnetic Waves and Application*. 2022, Vol. 36, No. 14, p. 2010-2026.
100. Riva Palacio, A., Leisen, F. and Griffin, J. Survival regression models with dependent Bayesian nonparametric priors. *Journal of the American Statistical Association*. 2022, Vol. 117, No. 539, p. 1530-1539.

101. **Robles, E.** y de Gortari, R. La integración de redes transnacionales en nanociencias y nanotecnología: el rol de la diáspora científica y la medicina traslacional. *REDES – Revista de Estudios Sociales de la Ciencia y la Tecnología*. 2021, Vol. 27, No. 53. (Publicado: 02/08/2022).
102. Valencia, A., Pérez, M.A. y **Robles, E.** Tendencias de producción de las patentes concedidas en la minería mexicana, 1970-2020. *Investigación Bibliotecológica: Archivonomía, Bibliotecología e Información*. 2022, Vol. 36, No. 91, p. 167-192.
103. **Rodríguez, C.E.** and **Mena, R.H.** COVID-19 clinical footprint to infer about mortality. *Journal of the Royal Statistical Society. Series A-Statistics in Society*. 2022, Vol. 185, Supl. 2, p. S547-S572.
104. **Romero, J.R.**, Luviano, A.S., Costas, M., Hernández, A. and Barrio, R.A. Dynamical shapes of droplets of cyclodextrin-surfactant solutions. *Scientific Reports*. 2022, Vol. 12, Art. No. 5252.
105. Bonakdarpour, B., Fraigniaud, P., Rajsbaum, S., **Rosenblueth, D.A.** and Travers, C. Decentralized asynchronous crash-resilient runtime verification. *Journal of the ACM*. 2022, Vol. 69, No. 5, Art. No. 34, p. 1-31.
106. Cortez, K.L. and **Rosenblueth J.F.** The supporting role of the Mangasarian-Fromovitz constraint qualification in calculus of variations. *Journal of Dynamical and Control Systems*. 2022, Vol. 28, p. 493-504.
107. Cansino, S., Torres, F., Estrada, C., Mercado, A., Medina, D., Esquivel, R. and **Ruiz-Velasco, S.** Effects of hypotension and hypertension on source memory and working memory. *Aging & Mental Health*. 2022, Vol. 26, No. 9, p. 1738-1746.
108. Carrillo, E., **Ruiz, A.A.** and Ibarra, L.E. El fideicomiso público estatal en el impuesto de fomento al turismo: su identificación en la estructura de la red del flujo financiero. *Trascender, contabilidad y gestión*. 2022, Vol. 7, No. 19, p. 88-106.
109. Argatov, I.I. and **Sabina, F.J.** Recovery of information on the depth-dependent profile of elastic FGMs from indentation experiments. *International Journal of Engineering Science*. 2022, Vol. 176, Art. No. 103659.
110. Markov, M., Markov, A., Levin, V. and **Sabina, F.J.** Electromagnetic field generated by acoustic wave scattering at a poroelastic inclusion located in a fluid. *International Journal of Engineering Science*. 2022, Vol. 181, Art. No. 103766.
111. Guinovart, D., Rodríguez, R., Vajravelu, K., Mohapatra, R., Guinovart, R., Brito, H., Tita, V. and **Sabina, F.J.** Prediction of effective properties for multilayered laminated composite with delamination: A multiscale methodology proposal. *Composite Structures*. 2022, Vol. 297, Art. No. 115910.
112. Rodríguez, R., Otero, J.A., Espinosa, Y., **Sabina, F.J.** and Levin, V. Closed-form expressions for the effective properties of piezoelastic composites reinforced with cylindrical fibers by Maxwell scheme. *Mechanics of Materials*. 2022, Vol. 174, Art. No. 104452.
113. Rodríguez, R., Yanes, V., Espinosa, Y., Otero, J.A., **Sabina, F.J.**, Sánchez, C.F. and Lebón, F. Micro-macro asymptotic approach applied to heterogeneous elastic micropolar media. Analysis of some examples. *International Journal of Solids and Structures*. 2022, Vol. 239-240, Art. No. 111444.

114. Cruz-González, O.L., Rodríguez, R., Lebón, F. and **Sabina, F.J.** Modeling of imperfect viscoelastic interfaces in composite materials. *Coatings*. 2022, Vol. 12, No. 5, Art. No. 705.
115. Kiselev, A.V., **Silva, L.O.** and Cherednichenko, K.D. Operator-norm resolvent asymptotic analysis of continuous media with high-contrast inclusions. *Mathematical Notes*. 2022, Vol. 111, p. 373-387.
116. **Siqueiros, J.M.**, Manuel, D., Eakin, H., Mojica, L., Charli-Joseph, L., Pérez, P. and Ruizpalacios, B. Sense of agency, affectivity and social-ecological degradation: An enactive and phenomenological approach. *Frontiers in Psychology*. 2022, Vol. 13, Art. No. 911092.
117. Alvarado, J., **Siqueiros, J.M.**, **Ramos, G.**, García, P.M. and Mazari, M. Barriers and bridges on water management in rural Mexico: from water-quality monitoring to water management at the community level. *Environmental Monitoring and Assessment*. 2022, Vol. 194, Art. No. 912.
118. González, A., Peñaloza, L. and **Siri-Jégousse, A.** The shape of a seed bank tree. *Journal of Applied Probability*. 2022, Vol. 59, No. 3, p. 631-651.
119. Kirsch, W. and **Toth, G.⁹** Limit theorems for multi-group Curie-Weiss models via the method of moments. *Mathematical Physics, Analysis and Geometry*. 2022, Vol. 25, No. 4, Art. No. 24, 43 p.
120. Kirsch, W. and **Toth, G.⁹** Collective bias models in two-tier voting systems and the democracy deficit. *Mathematical Social Sciences*. 2022, Vol. 119, p. 118-137.
121. **Velarde, C.B.** and Robledo, A. Number theory, borderline dimension and extensive entropy in distributions of ranked data. *PLoS One*. 2022, Vol. 17, No. 12, Art. No. E0279448.
122. Robledo, A. and **Velarde, C.B.** How, why and when tsallis statistical mechanics provides precise descriptions of natural phenomena. *Entropy*. 2022, Vol. 24, No. 12, Art. No. 1761.
123. **Villalpando, J.L.¹⁰**, López, I., Montero, A., Azuara, E., Valencia, J.J., Trejo, C. and Kubli, C. Single-step protocol for isolating the recombinant extracellular domain of the luteinizing hormone receptor from the ovis aries testis. *Current Issues in Molecular Biology*. 2022, Vol. 44, No. 11, p. 5718 – 5727.
124. **Weder, R.A.** The L^p boundedness of the wave operators for matrix Schrödinger equations. *Journal of Spectral Theory*. 2022, Vol. 12, No. 2, p. 707-744.

⁹ Becario Cátedra Extraordinaria IIMAS del Departamento de Física Matemática.

¹⁰ Becario Posdoctoral de la Unidad Académica del IIMAS en el estado de Yucatán.