

Artículos publicados

2022 (14)

- Muñiz-Sánchez, V., Valdez-Delgado, K. M., Hernandez-Lopez, F. J., Moo-Llanes, D. A., González-Farías, G., & Danis-Lozano, R. (2022). Use of Unmanned Aerial Vehicles for Building a House Risk Index of Mosquito-Borne Viral Diseases. *Machines*, 10(12), 1161.
- Corona, F., González-Farías, G., & López-Pérez, J. (2022). Timely Estimates of the Monthly Mexican Economic Activity. *Journal of Official Statistics (JOS)*, 38(3).
- Martínez-Hernández, I., Gonzalo, J., & González-Farías, G. (2022). Nonparametric estimation of functional dynamic factor model. *Journal of Nonparametric Statistics*, 1-22.
- Corona, F., Muriel, N., & González-Farías, G. (2022). Dynamic factor structure of team performances in Liga MX. *Journal of Applied Statistics*, 49(7), 1900-1912.
- Caro-Lopera, F. J., González Farías, G., & Balakrishnan, N. (2022). Matrix Variate Distribution Theory under Elliptical Models—V: The Non-Central Wishart and Inverted Wishart Distributions. *Mathematical Methods of Statistics*, 31(1), 18-42.
- Márquez-Urbina, J. U., & González-Farías, G. (2022). A flexible special case of the CSN for spatial modeling and prediction. *Spatial Statistics*, 47, 100556.
- Márquez Urbina, J. U., González Farías, G., Ramírez Ramírez, L. L., & Rodríguez González, D. I. (2022). A multi-source global-local model for epidemic management. *PLoS One*, 17(1), e0261650.
- Sierra-Alcocer, R., López-Ramírez, P., & González-Farías, G. (2022). A Dynamic Social Vulnerability Index to COVID-19 in Mexico. In *International Conference on Geospatial Information Sciences* (pp. 177-193). Springer, Cham.
- Rosales-Pérez, A., García, S., & Herrera, F. (2022). Handling Imbalanced Classification Problems With Support Vector Machines via Evolutionary Bilevel Optimization. *IEEE Transactions on Cybernetics*.
- Rosales-Pérez, A. (2022). A review on machine learning techniques for acute leukemia classification. *Biosignal Processing and Classification Using Computational Learning and Intelligence*, 429-446.
- Davies, M., Reyes-Figueroa, A. D., Gurtovenko, A. A., Frankel, D., & Karttunen, M. (2022). Elucidating lipid conformations in the ripple phase: Machine learning reveals four lipid populations. *Biophysical Journal*.
- Jaramillo-Granada, A. M., Reyes-Figueroa, A. D., & Ruiz-Suárez, J. C. (2022). Xenon and Krypton Dissolved in Water Form Nanoblobs: No Evidence for Nanobubbles. *Physical Review Letters*, 129(9), 094501.
- Que-Salinas, U., Martinez-Peon, D., Reyes-Figueroa, A. D., Ibarra, I., & Scheckhuber, C. Q. (2022). On the Prediction of In Vitro Arginine Glycation of Short Peptides Using Artificial Neural Networks. *Sensors*, 22(14), 5237.

- Hernández-Leandro, N. A., Ibarra-Rojas, O., & Camacho-Vallejo, J. F. (2022). A bi-objective humanitarian logistics model considering equity in the affected zones: application to a recent earthquake in Mexico. *RAIRO-Operations Research*, 56(3), 1737-1762.

2021 (11)

- García-Medina, A., & Luu Duc Huynh, T. (2021). What drives bitcoin? An approach from continuous local transfer entropy and deep learning classification models. *Entropy*, 23(12), 1582.
- José B. Hernández, José B. Hernández C., Andrés García-Medina y Miguel A. Porro V. (20-21). Study of the Behavior of Cryptocurrencies in Turbulent Times Using Association Rules.
- Graciela Gzz. Farías, Francisco Corona, Nelson Muriel, and Graciela González-Farías (2021). Dynamic factor structure of team performances in Liga MX. *Journal of Applied Statistics*, Accepted, Jan 22, 2021. JCR 1.03.
- Andrés García Medina, Andrés García-Medina, Norberto A. Hernández-Leandro, Graciela González Farías, Nelson Muriel (2021). Multistage allocation problem for Mexican pension funds.
- Andrés García Medina, Román Alejandro Mendoza Urdiales, Andrés Medina-García (2021). Measuring information flux between social media and stock prices with Transfer Entropy.
- Lilia Alanís-López, Martha-Selene Casas-Ramírez, José-Fernando Camacho-Vallejo (2021). Solving binary programming problems using homotopy theory ideas (<https://www.emerald.com/insight/content/doi/10.1108/EC-04-2021-0251/full/html>).
- Alejandro Rosales Pérez, Andreu-Perez, Javier; Pérez-Espinosa, Humberto; Timonet, Eva; Kiani, Mehrin; Girón-Pérez, Manuel Iván; Benitez-Trinidad, Alma B.; Jarchi, Delaram; Rosales, Alejandro; Gkatzoulis, Nick; Reyes-Galaviz, Orion; Torres, Alejandro; Alberto Reyes-García, Carlos; Ali, Zulfiqar; Rivas, Francisco (2022). A Generic Deep Learning Based Cough Analysis System from Clinically Validated Samples for Point-of-Need Covid-19 Test and Severity Levels.
- Alejandro Rosales Pérez, Germán González-Almagro, Alejandro Rosales-Pérez Julián Luengo José-Ramón Cano, Salvador García (2021). ME-MEOA/D CC : Multiobjective Constrained Clustering Through Decomposition-based Memetic Elitism.
- Norberto A. Hernández Leandro, José Fernando Camacho, Omar Ibarra (2021). A bi-objective humanitarian logistics model considering equity in affected zones for contingencies.

- Victor Muñiz, Hairo Miranda, Victor Muñiz and Francisco Corona (2021). Word embeddings for topic modeling: an application to the estimation of the economic policy uncertainty index.
- Victor Muñiz, Hairo Miranda, Victor Muñiz and Francisco Corona (2021). Nowcasting Mexican economic activity by using deep learning approaches: A comparison with econometric models.

2020 (16)

- Graciela Gzz. Farías, Adolphus Wagala, Graciela González Farías, Rogelio Ramos and Oscar Dalmau Cedeño (2020). PLS Generalized Linear Regression and Kernel Multilogit Algorithm (KMA) for Microarray Data Classification Problem. *Revista Colombiana de Estadística*, Vol 43, No. 2 pp 233-249. ISSN 0120-1751.
- Graciela Gzz. Farías, F. Peraza-Garay, J. U. Márquez-Urbina and G. González-Farías (2020). Inference for the Analysis of Ordinal Data with Spatio-Temporal Models Article Number: 20190101 Published online: 03 Apr 2020. ISSN 15574679.
- Graciela Gzz. Farías, Andrés García-Medina and Graciela González Farías (2020). Transfer entropy as a variable selection methodology of cryptocurrencies in the framework of a high dimensional predictive model, *PloSOne*.
- José B. Hernández, José B. Hernández C., Jorge A. Flores S. and Jesús Láres. (2020). Implementation of neural networks in time series to generate a portfolio of investment in Cryptocurrencies”, *Journal of Mathematics and System Science*, (10) 2020. ISSN: 2159-5291. doi: 10.17265/2159-5291/2020.01.001
- José B. Hernández, Andrés García-Medina, José B. Hernández (2020). Network Analysis of Multivariate Transfer Entropy of Cryptocurrencies in Times of Turbulence, *Entropy*, Volume 22, Issue 7, ISSN: 1099-4300, doi: 10.3390/e22070760.
- José B. Hernández, José B. Hernández C., Jesús Lares y Mairene Colina. (2020). Application of ARIMA-GARCH models for the estimation of crypto-currency price returns”. Special Volume of the XV CLAPEM, by Birkhäuser.
- Rodrigo Macías Páez, Rodrigo Macías, José Fernando Vera (2020). On the behaviour of K-means clustering of a dissimilarity matrix by means of full multidimensional scaling. *Psychometrika*, Accepted JCR 1.959.
- Rodrigo Macías Páez, Edgar Jiménez, Rodrigo Macías (2020). Graphical tools for visualization of missing data in large longitudinal phenomena. *IEEE Transactions on Visualization and Computer Graphics*.
- Rodrigo Macías Páez, Rodrigo Macías, José Fernando Vera (2020). Full dimensional scaling to determine the number of clusters in K-means for dissimilarity data. *Advances in Data Analysis and Classification*.

- Martha Selene Casas Ramírez, Mario A Aguirre-López, Roberto Soto-Villalobos, Martha-Selene Casas-Ramírez, F-Javier Almaguer (2020). A comparative study on using metaheuristics for the seismic-ray-tracing problem.
- Victor Muñiz, Aldana-Bobadilla, Edwin; Molina-Villegas, Alejandro; Lopez-Arevalo, Ivan; Reyes-Palacios, Shanel; Muñiz-Sanchez, Victor; Arreola-Trapala, Jean. (2020). Adaptive Geoparsing Method for Toponym Recognition and Resolution in Unstructured Text. *Remote Sensing*. 2020; 12(18):3041. <https://doi.org/10.3390/rs12183041>.
- Victor Muñiz, Lopez-Arevalo, Ivan; Aldana-Bobadilla, Edwin; Molina-Villegas, Alejandro; Galeana-Zapién, Hiram; Muñiz-Sanchez, Victor; Gausin-Valle, Saul. (2020). A Memory-Efficient Encoding Method for Processing Mixed-Type Data on Machine Learning. *Entropy*. 2020; 22(12):1391. <https://doi.org/10.3390/e22121391>.
- Victor Muñiz, Alejandro Molina-Villegas, Victor Muñiz-Sánchez, Jean Arreola-Trapala and Filomeno Alcántara (2020). Geographic Named Entity Recognition and Disambiguation in Mexican News using Word Embeddings.
- Victor Muñiz, Victor Muñiz-Sánchez, Pilar Fuerte-Celis and Kenny Méndez-Ramírez (2020). The killing fields. A Bayesian analysis of crop eradication and organized crime violence in Mexico.
- F. Peraza-Garay, J. U. Márquez-Urbina and G. González-Farías* (2020). Inference for the Analysis of Ordinal Data with Spatio-Temporal Models, Article Number: 20190101 Published online: 03 Apr 2020. SIMAGO:Q1. <https://www.degruyter.com/view/journals/ijb/ahead-of-print/article-10.1515-ijb-2019-0101/article-10.1515-ijb-2019-0101.xml>
- Andrés García-Medina* & Graciela González Farías (2020). Transfer entropy as a variable selection methodology of cryptocurrencies in the framework of a high dimensional predictive model, *PloSOne*, Open access. Published: January 2, 2020 <https://doi.org/10.1371/journal.pone.0227269> , SIMAGO:Q1. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0227269>.

2019 (3)

- R. Bhattacharya, B. N. Saha, G. G. Farías and N. Balakrishnan. (2019). Multi-criteria-based optimal life-testing plans under hybrid censoring scheme, *TEST* (2019), pp. 1-24. <https://doi.org/10.1007/s11749-019-00660-8>.
- David A. Dickey, Graciela González-Farías and Nelson Muriel (2019). Asymptotic analysis of none-periodical cointegration with high seasonals. *Boletín de la Sociedad Matemática Mexicana*. July 2019, Volume 25, Issue 2, pp 443–459 ISSN: 1405-213X (AO) . <http://link.springer.com/article/10.1007/s40590-018-0201-2>.
- Israel Martínez-Hernández , Marc G. Genton, Graciela González-Farías (2019). Robust depth-based estimation of the functional autoregressive model. *Computational Statistics and Data Analysis* , 131 66–79. ISSN 0167-9473.

2018(9)

- Nelson Muriel and Graciela González-Farías (2018). Testing the null of difference stationarity against the alternative of a stochastic unit root: A new test based on Multivariate STUR, *Econometrics and Statistics*. Volume 7, Pages 46-62. ISSN: 2452-3062.
- García-Medina, A., Junior, L. S., Bañuelos, E. U., & Martínez-Argüello, A. M. (2018). Correlations and flow of information between the New York Times and stock markets. *Physica A: Statistical Mechanics and its Applications*, 502, 403-415.
-
- Sen, T., Bhattacharya, R., Tripathi, Y. M., & Pradhan, B. (2018). Generalized hybrid censored reliability acceptance sampling plans for the Weibull distribution. *American Journal of Mathematical and Management Sciences*, 37(4), 324-343.
- Sen, T., Pradhan, B., Tripathi, Y. M., & Bhattacharya, R. (2018). Fisher information in generalized progressive hybrid-censored data. *Statistics*, 52(5), 1025-1039.
- Aslam, M., Bhattacharya, R., & Aldosari, M. S. (2018). Design of control chart in presence of hybrid censoring scheme. *IEEE Access*, 6, 14895-14907.
- Sen, T., Tripathi, Y. M., & Bhattacharya, R. (2018). Statistical inference and optimum life testing plans under type-II hybrid censoring scheme. *Annals of Data Science*, 5(4), 679-708.
- Bhattacharya, R., & Pradhan, B. (2018). Bayesian design of life testing plans under hybrid censoring scheme. *Quality and Reliability Engineering International*, 34(1), 93-106.
- Romero-Hdz, J., Saha, B., Toledo-Ramirez, G., & Lopez-Juarez, I. (2018). A Reinforcement learning based approach for welding sequence optimization. In *Transactions on Intelligent Welding Manufacturing* (pp. 33-45). Springer, Singapore.
- J. Hernández. Indecomposable cycles and arithmetic normal functions. *Boletín de la Sociedad Matemática Mexicana*. 2018.

2017 (14)

- Montalvo-Urquizo, M.A. Moreles Vázquez, S. Botello Rionda (Eds.). *Notas de Modelación y Métodos Numéricos VII: Mathematical Models for Material Sciences and Industrial Applications*. Ed. CIMAT-CIMNE, México-España (2017).
- J. Montalvo-Urquizo. Thermomechanics: Physical models and mathematical equations, en J. Montalvo-Urquizo, M.A. Moreles Vázquez, S. Botello Rionda (Eds). *Notas de Modelación y Métodos Numéricos VII: Mathematical Models for Material Sciences and Industrial Applications*. Ed. CIMAT-CIMNE, México-España (2017).
- J. Montalvo-Urquizo, C. Niebuhr, M. G. Villarreal-Marroquín. Simulation-based Multiobjective Optimization for Milling Processes, *Zentrum fur Technomathematik, Fachbereich 3 – Mathematik und Informatik, Technical Report 17-02* (2017).

- J. Montalvo-Urquizo, M. G. Villarreal-Marroquín, J.J. Hernández-Castillo, H. E. Hernández-González. MWTP: Monterrey Weather, Traffic and Pollution Database for Geospatial Analysis, arXiv:1703.04526 (2017).
- B. N. Saha, N. Ray, S. McArdle, and K. Ley, "Selecting the optimal sequence for deformable registration of microscopy image sequences using a two-stage MST-based clustering algorithm", Proceedings of the 20th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), pp. 353-361, (2017).
- B. N. Saha, N. Ray, S. McArdle, and K. Ley, "A two-stage Minimum Spanning Tree (MST) based clustering algorithm for 2D deformable registration of time sequenced images", IEEE international Conference on Image Processing (ICIP), pp. 1472 – 1476, (2017).
- D. Ortega-Aranda, I. Lopez-Juarez, B. N. Saha, R. Osorio-Comparan, M. Peña-Cabrera, G. Lefranc, "Learning Contact States during Peg-in-hole Assembly with a Dual-Arm Robot", accepted at IEEE CHILECON, pp. 1-6, (2017).
- A. Saucedo, E. Rodriguez, J. Romero, D. Ortega and B. N. Saha, "Implementation of Computer Vision Guided Peg-Hole Insertion Task Performed by Robot through LabVIEW", MICAI 2016, Part I, Lecture Notes in Artificial Intelligence (LNAI) 10061, pp. 437–458, (2017).
- J. Romero-Hdz, B. N. Saha, S. Tstutsumia, R. Fincatoa, and G. Toledo, "Statistical validation of weldment deformation through welding simulation and 3d optical scanning," in Proceedings of the Welding Structure Symposium, (2017), pp. 1–8.
- J. Romero-Hdz, S. Tstutsumia, R. Fincatoa, and B. N. Saha, "Influence of welding sequence on residual stress and deformation pattern using conventional and ltt wires," in Proceedings of the Welding Structure Symposium, (2017), pp. 1–8.
- T. P. Mukhopadhyay, B. N. Saha, N. Gurieva, and R. T. Lopez, "Rosa Mexicano: The Social Optics of a Color Neologism," Journal of the International Colour Association, pp. 1-16, 2017.
- T. P. Mukhopadhyay, M. Siprut, and B. N. Saha, "Digital Diversions in Education: Interactive Multimedia for Adolescent Motivation in Unilateral Classroom Scenarios", International Journal of Innovation, Creativity and Change, vol. 3, pp. 60 – 74, (2017).
- M.G. Villarreal-Marroquín, P-H. Chen, M. Rachmat, T.J. Santner, A.D. Dean, J.M. Castro. Multiobjective optimization of Injection Molding using a calibrated predictor based on physical and simulated data, Journal of Polymer Engineering & Science, Volume 57, Issue 3, pp. 248–257 (2017).
- Bhattacharya, R., & Pradhan, B. (2017). Computation of optimum Type-II progressively hybrid censoring schemes using variable neighborhood search algorithm. *Test*, 26(4), 802-821.

2016 (12)

- Francisco J. Caro-Lopera, Graciela González-Farías and N.Balakrishnan. Matrix-variate distribution theory under elliptical models - 4: Joint distribution of latent roots of covariance

matrix and the largest and smallest latent roots. *Journal of Multivariate Analysis*, Vol.145, pp 224–235. ISSN: 0047-259X (2016).

- Berrones, A., Jiménez, E., Alcorta-García, M. A., Almaguer, F. J., & Peña, B. Parameter inference of general nonlinear dynamical models of gene regulatory networks from small and noisy time series. *Neurocomputing*, 175, 555-563 (2016).
- A. S. Cienfuegos, B. N. Saha, J. Romero-Hdz, and D. Ortega, “Efficient Integration of Template Matching , Calibration and Triangulation for Automating Peg Hole Insertion Task Using Two Cameras”, *SSRG International Journal of Computer Science and Engineering (SSRG-IJCSE)*, vol. 3, issue. 11, pp. 61-70, November, (2016).
- E. Rodriguez, B. N. Saha, J. Romero-Hdz, and D. Ortega, “A Multi-objective Differential Evolution Algorithm for Robot Inverse Kinematics”, *SSRG International Journal of Computer Science and Engineering (SSRG-IJCSE)*, ISSN: 2348-8387, vol. 3, issue. 11, pp. 71-79, November, (2016).
- J. Alonso-Tovar, B. N. Saha, J. Romero-Hdz., and D. Ortega, “Bayesian Network Classifier with Efficient Statistical Time-Series Features for the Classification of Robot Execution Failures”, *SSRG International Journal of Computer Science and Engineering (SSRG-IJCSE)*, ISSN: 2348-8387, vol. 3, issue. 11, pp. 80-89, November, (2016).
- J. Romero-Hdz, B. N. Saha, and G. Toledo, “Welding Sequence Optimization through a Modified Lowest Cost Search Algorithm”, *Journal of Computer Science and Engineering*, vol. 6, no. 2, pp. 25-32, (2016).
- J. Romero-Hd, S. Aranda, G. Toledo-Ramirez, J. Segura and B. N. Saha, “Deformation and residual stress based multiobjective genetic algorithm for welding sequence optimization”, *Journal of Research in Computing Science*, vol. 132, pp. 155-179, (2016).
- J. Romero-Hdz, S. Aranda, G. Toledo-Ramirez, J. Segura and B. N. Saha, “An elitism based genetic algorithm for welding sequence optimization to reduce deformation”, Accepted in *Journal of Research in Computing Science*, vol. 121, pp. 17-36, (2016).
- J. Romero-Hdz, B. N. Saha, G. Toledo-Ramirez, and D. Beltran-Bqz, “Welding Sequence Optimization Using Artificial Intelligence Techniques, an Overview”, *SSRG International Journal of Computer Science and Engineering (SSRG-IJCSE)*, vol. 3, issue. 11, pp. 90-95, November, 2016.
- J. Romero-Hdz, B. N. Saha, and G. Toledo, “Deformation Driven Fast and Approximate Shortest Path Algorithm for Selecting a Pseudo-Optimal Welding Sequence”, *Global Conference on Engineering and Applied Science*, vol. GCEAS-487, pp. 439-450, (2016).
- J. Romero-Hdz, B. N. Saha, and G. Toledo-Ramirez, “A multiobjective genetic algorithm for welding sequence optimization”, under preparation, pp. 1–20, (2016).
- M.G. Villarreal-Marroquín, P-H. Chen, M. Rachmat, T.J. Santner, A.D. Dean, J.M. Castro. Using physical and simulated data to improve injection molding performance. *PSE Plastics Research Online*. DOI: 10.2417/spepro.006773 (2016).