

# PUBLICACIONES EN REVISTAS INTERNACIONALES

- 1** Karthikeyan, C., Varaprasad, K., **Akbari-Fakhrabadi, A.**, Hameed, A.S.H., Sadiku, R. "Biomolecule chitosan, curcumin and ZnO-based antibacterial nanomaterial, via a one-pot process". Carbohydrate Polymers, 2020, 249, 116825; <https://doi.org/10.1016/j.carbpol.2020.116825>
- 2** Arnauda, B., **Akbari-Fakhrabadi, A.**, Orlovskaya, N., **Meruane, V.**, Araki, W. "Room temperature ferroelastic creep behavior of porous  $(La_{0.6}Sr_{0.4})_0.95CO_0.2Fe_{0.8}O_3-\delta$ ". Processes, 2020, 8(11), pp. 1-10, 1346; <https://doi.org/10.3390/pr8111346>
- 3** Arun, T., Kavin Kumar, T., Udayabhaskar, R., ...Mangalaraja, R.V., **Akbari-Fakhrabadi, A.** "Size dependent magnetic and capacitive performance of MnFe<sub>2</sub>O<sub>4</sub> magnetic nanoparticles". Materials Letters, 2020, 276, 128240; <https://doi.org/10.1016/j.matlet.2020.128240>
- 4** Thandapani, P., Ramalinga Viswanathan, M., Vinícius-Araújo, M., ...Jiménez, J.A., **Akbari-Fakhrabadi, A.** "Single-phase and binary phase nanograngular ferrites for magnetic hyperthermia application". Journal of the American Ceramic Society, 2020, 103(9), pp. 5086-5097; <https://doi.org/10.1111/jace.17175>
- 5** Muneeswaran, M., **Akbari-Fakhrabadi, A.**, Gracia-Pinilla, M.A., Denardin, J.C. "Structural, electrical, ferroelastic behavior, and multiferroic properties of BiFeO<sub>3</sub>". Journal of Materials Science: Materials in Electronics, 2020, 31(16), pp. 13141-13149. DOI:10.1007/s10854-020-03865-y
- 6** Jayaramudu, T., Varaprasad, K., Reddy, K.K., ...**Akbari-Fakhrabadi, A.**, Amalraj, J. "Chitosan-pluronic based Cu nanocomposite hydrogels for prototype antimicrobial applications". International Journal of Biological Macromolecules, 2020, 143, pp. 825-832. DOI: 10.1016/j.ijbiomac.2019.09.143
- 7** Savariraj, A.D., Vinoth, V., Mangalaraja, R.V., ...Valdés, H., Banat, F. **Akbari-Fakhrabadi, A.** "Microwave-assisted synthesis of localized surface plasmon resonance enhanced bismuth selenide (Bi<sub>2</sub>Se<sub>3</sub>) layers for non-enzymatic glucose sensing". Journal of Electroanalytical Chemistry, 2020, 856, 113629. <https://doi.org/10.1016/j.jelechem.2019.113629>
- 8** M.H.B.M. Shariff, **R. Bustamante**. "A spectral approach for nonlinear transversely isotropic elastic bodies, for a new class of constitutive equation. Applications to rock mechanics". Acta Mechanica 231 (2020) 4803-4818; <https://doi.org/10.1007/s00707-020-02797-2>
- 9** **R. Bustamante**, S. Montero, **A. Ortiz-Bernardin**. "A novel nonlinear constitutive model for rock: numerical assessment and benchmarking". Applications in Engineering Science 3 (2020) 100012; <https://doi.org/10.1016/j.apples.2020.100012>
- 10** **R. Bustamante**, K.R. Rajagopal, R. Meneses, O. Orellana. "Implicit constitutive relations for visco-elastic solids: Part II. Non-homogeneous deformations". International Journal of Nonlinear Mechanics 126 (2020) 103560; <https://doi.org/10.1016/j.ijnonlinmec.2020.103560>
- 11** **R. Bustamante**, K.R. Rajagopal, R. Meneses, O. Orellana. "Implicit constitutive relations for describing the response of visco-elastic bodies". International Journal of Nonlinear Mechanics 126 (2020) 103526; <https://doi.org/10.1016/j.ijnonlinmec.2020.103526>
- 12** M.H.B.M. Shariff, **R. Bustamante**, J. Merodio. "A nonlinear spectral rate-dependent constitutive equation for electro-viscoelastic solids". Zeitschrift für angewandte Mathematik und Physik 71 (2020) 126. DOI: 10.1007/s00033-020-01353-1
- 13** M.H.B.M. Shariff, **R. Bustamante**. "A consistent isotropic spectral constitutive equation: The infinitesimal strain depends nonlinearly on the stress". Applications in Engineering Science 1 (2020) 100007; <https://doi.org/10.1016/j.apples.2020.100007>
- 14** **R. Bustamante**. "Some universal solutions for a class of incompressible elastic body that is not Green elastic. The case of large elastic deformations". The Quarterly Journal of Mechanics and Applied Mathematics 73 (2020) 177-199; <https://doi.org/10.1093/qjmam/hbaa006>

- 15** R. Bustamante. "New classes of electro-elastic and thermo-electro-elastic bodies that are not Green elastic". International Journal of Engineering Science 152 (2020) 103308; <https://doi.org/10.1016/j.ijengsci.2020.103308>

- 16** M.H.B.M. Shariff, R. Bustamante, J. Merodio. "A nonlinear constitutive model for a two preferred direction electro-elastic body with residual stresses". International Journal of Nonlinear Mechanics 119 (2020) 103352; <https://doi.org/10.1016/j.ijnonlinmec.2019.103352>

- 17** M.H.B.M. Shariff, R. Bustamante, J. Merodio. "A nonlinear electro-elastic model with residual stresses and a preferred direction". Mathematics and Mechanics of Solids 25 (2020) 838-865; <https://doi.org/10.1177/1081286519891769>

- 18** R. Bustamante. "Some universal solutions for incompressible elastic bodies that are not green elastic". International Journal of Engineering Science 149 (2020) 103223; DOI: [10.1016/j.ijengsci.2020.103223](https://doi.org/10.1016/j.ijengsci.2020.103223)

- 19** R. Bustamante. "Corrigendum: Direct determination of stresses from the stress equations of motion and wave propagation for a new class of elastic bodies". Mathematics and Mechanics of Solids 25 (2020) 866-868; <https://doi.org/10.1177/1081286517693294>

- 20** B. Herrmann, M. Behzad, J.M. Cardemil, W.R. Calderón-Muñoz, R.M. Fernández, "Conjugate heat transfer model for feedback control and state estimation in a volumetric solar receiver". Sol. Energy. 198 (2020) 343-354; <https://doi.org/10.1016/j.solener.2020.01.062>.

- 21** Paccha-Herrera E, Calderón-Muñoz WR, Orchard M, Jaramillo F, Medjaher K. Thermal Modeling Approaches for a LiCoO<sub>2</sub> Lithium-ion Battery—A Comparative Study with Experimental Validation. Batteries. 2020; 6(3):40; <https://doi.org/10.3390/batteries6030040>

- 22** J.M. Cardemil, W. Schneider, M. Behzad, A.R. Starke. "Thermal analysis of a water source heat pump for space heating using an outdoor pool as a heat source". J. Build. Eng. 33 (2021) 101581; <https://doi.org/10.1016/j.jobe.2020.101581>

- 23** C. Correa-Jullian, E. López Drogue, J. M. Cardemil. "Operation scheduling in a solar thermal system : A reinforcement learning- based framework". Appl. Energy. 268 (2020) 114943; <https://doi.org/10.1016/j.apenergy.2020.114943>

- 24** B. Herrmann, M. Behzad, J.M. Cardemil, W.R. Calderón-Muñoz, R.M. Fernández, "Conjugate heat transfer model for feedback control and state estimation in a volumetric solar receiver". Sol. Energy. 198 (2020) 343-354; <https://doi.org/10.1016/j.solener.2020.01.062>

- 25** A. Diaz, R. Caceres, R. Torres, J. M. Cardemil, L. Silva-Illanca. "Effect of climate conditions on the thermodynamic performance of a data center cooling system under water-side economization". Energy Build. 208 (2020) 109634; <https://doi.org/10.1016/j.enbuild.2019.109634>

- 26** C. Correa-Jullian, J.M. Cardemil, E. López Drogue, M. Behzad. "Assessment of Deep Learning Techniques for Prognosis of Solar Thermal Systems". Renew. Energy. 145 (2020) 2178-2191; <https://doi.org/10.1016/j.renene.2019.07.100>

- 27** G. Quiñones, C. Felbol, C. Valenzuela, J.M. Cardemil, R.A. Escobar. "Analyzing the potential for solar thermal energy utilization in the Chilean copper mining industry". Sol. Energy. 197 (2020) 292-310; <https://doi.org/10.1016/j.solener.2020.01.009>

- 28** C. Mata-torres, P. Palenzuela, A. Zurita, J.M. Cardemil, D. Alarcón-padilla, R.A. Escobar. "Annual thermoeconomic analysis of a Concentrating Solar Power + Photovoltaic + Multi-Effect Distillation plant in northern Chile". Energy Convers. Manag. 213 (2020) 112852; <https://doi.org/10.1016/j.enconman.2020.112852>

- 29** A. Zurita, C. Mata-torres, **J.M. Cardemil**, R.A. Escobar. "Assessment of time resolution impact on the modeling of a hybrid CSP-PV plant: A case of study in Chile". Sol. Energy. 202 (2020) 553-570; <https://doi.org/10.1016/j.solener.2020.03.100>

- 30** P. Pinto, A. Cabrera, J.J. Cruz, J. Contreras, G. Severino, R. Demarco, **J.C. Elicer-Cortés**, A. Fuentes, "Effects of wildland fuel moisture content on radiant heat flux emitted by a laminar non-premixed flame", Applied Thermal Engineering, Volume 181, 2020, 115968, ISSN 1359-4311; <https://doi.org/10.1016/j.applthermaleng.2020.115968>

- 31** **J.C. Elicer-Cortés**, N. Molina, G. Severino, A. Fuentes, P. Rojas, Turbulent transport mechanisms on the heat confinement in tunnels by using low-velocity air curtains, Applied Thermal Engineering, Volume 181, 2020, 115852, ISSN 1359-4311; <https://doi.org/10.1016/j.applthermaleng.2020.115852>

- 32** Barraud, C., & **Hernández, R. H.** "Dynamic and kinematic characterization of the impulsive wavemaker system in a numerical wave tank". AIP Advances 10, 115306 (2020); <https://doi.org/10.1063/5.0017376>

- 33** **Hernández, R. H.**, & Tapia, L. "Vortex dynamics and scalar transport in the wake of a flat-plate controlled by a vibrating trailing-edge flap", International Journal of Heat and Fluid Flow 2020. DOI: [10.1016/j.ijheatfluidflow.2019.108526](https://doi.org/10.1016/j.ijheatfluidflow.2019.108526)

- 34** **B. Herrmann**, P. Oswald, R.Semaan, S. L. Brunton. "Modeling synchronization in forced turbulent oscillator flows". Communications Physics, 195 (2020); <https://doi.org/10.1038/s42005-020-00466-3>

- 35** Álvaro Rodríguez, Sebastián Peña, Isabel Cavieres, María José Vergara, Marcela Pérez, Miguel Campos, Daniel Peredo, **Patrício Jorquera, Rodrigo Palma H.**, Dennis Cortés, Mauricio López, Sergio Morales. "Ocular trauma by kinetic impact projectiles during civil unrest in Chile", Eye 35, 1666-1672 (2021); <https://doi.org/10.1038/s41433-020-01146>

- 36** Martins, M. R., Pestana, M. A., & **López Droguett, E. A.** "A Methodology for Assessing the Probability of Occurrence of Undesired Events in the Tietê-Paraná Inland Waterway Based on Expert Opinion". Risk Analysis Volume40, Issue6, June 2020 Pages 1279-1301. <https://doi.org/10.1111/risa.13473>

- 37** Heitor Oliveira Duarte, **Enrique López Droguett**, Márcio das Chagas Moura, Paulo Gabriel Santos Campos Siqueira & José Claudio de Lira Júnior (2020) "A novel quantitative ecological and microbial risk assessment methodology: theory and practice, Human and Ecological". Risk Assessment: An International Journal, 26:6, 1622-1645. DOI: [10.1080/10807039.2019.1596736](https://doi.org/10.1080/10807039.2019.1596736)

- 38** Azevedo, Rafael & Moura, Marcio & Lins, Isis & **López Droguett, Enrique**. (2020). "A multi-objective approach for solving a replacement policy problem for equipment subject to imperfect repairs". Applied Mathematical Modelling. DOI: [86.10.1016/j.apm.2020.04.007](https://doi.org/10.1016/j.apm.2020.04.007)

- 39** García, J., Lalla-Ruiz, E., **López Droguett Enrique**, Voß, S. et al. "Enhancing a machine learning binarization framework by perturbation operators: analysis on the multidimensional knapsack problem". Int. J. Mach. Learn. & Cyber. 11, 1951-1970 (2020); <https://doi.org/10.1007/s13042-020-01085-8>

- 40** Aria, A., **López Droguett**, E., Azarm, S., & Modarres, M. (2020). Estimating damage size and remaining useful life in degraded structures using deep learning-based multi-source data fusion. Structural Health Monitoring, 19(5), 1542-1559; <https://doi.org/10.1177/1475921719890616>

- 41** M. Abílio Ramos, **E. López Droguett**, A. Mosleh, M. Das Chagas Moura, "A human reliability analysis methodology for oil refineries and petrochemical plants operation: Phoenix-PRO qualitative framework", Reliability Engineering & System Safety, Volume 193, 2020, 106672, ISSN 0951-8320; <https://doi.org/10.1016/j.ress.2019.106672>

- 42** Taotao Zhou, **Enrique López Droguett**, Mohammad Modarres, "A common cause failure model for components under age-related degradation", Reliability Engineering & System Safety, Volume 195, 2020, 106699, ISSN 0951-8320; <https://doi.org/10.1016/j.ress.2019.106699>.

- 43** Verstraete D, **López Droguett E**, Modarres M. "A Deep Adversarial Approach Based on Multi-Sensor Fusion for Semi-Supervised Remaining Useful Life Prognostics". Sensors (Basel). 2019 Dec 27;20(1):176. DOI: [10.3390/s20010176](https://doi.org/10.3390/s20010176)

- 44** Verstraete, D. B., **Droguett, E. L.**, **Meruane, V.**, Modarres, M., & Ferrada, A. (2020). Deep semi-supervised generative adversarial fault diagnostics of rolling element bearings. *Structural Health Monitoring*, 19(2), 390-411; <https://doi.org/10.1177/1475921719850576>
- 45** Ruiz-Tagle Palazuelos, A., **Droguett, E. L.**, & **Pascual, R.** (2020). A novel deep capsule neural network for remaining useful life estimation. *Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability*, 234(1), 151-167; <https://doi.org/10.1177/1748006X19866546>
- 46** Camila Correa-Jullian, **Enrique López Droguett**, **José Miguel Cardemil**, Operation scheduling in a solar thermal system: A reinforcement learning-based framework, *Applied Energy*, Volume 268, 2020, 114943, ISSN 0306-2619; <https://doi.org/10.1016/j.apenergy.2020.114943>
- 47** Ana Cláudia Souza Vidal de Negreiros, Isis Didier Lins, Márcio José das Chagas Moura, **Enrique López Droguett**, "Reliability data analysis of systems in the wear-out phase using a (corrected) q-Exponential likelihood", *Reliability Engineering & System Safety*, Volume 197, 2020, 106787, ISSN 0951-8320; <https://doi.org/10.1016/j.ress.2019.106787>
- 48** Mahmoodzadeh, Z., Wu, K. Y., **López Droguett, E.**, & Mosleh, A. (2020). "Condition-Based Maintenance with Reinforcement Learning for Dry Gas Pipeline Subject to Internal Corrosion". *Sensors* (Basel, Switzerland), 20(19), 5708; <https://doi.org/10.3390/s20195708>
- 49** Joaquín Figueroa Barraza, **Enrique López Droguett**, **Viviana Meruane Naranjo**, Marcelo Ramos Martins, "Capsule Neural Networks for structural damage localization and quantification using transmissibility data", *Applied Soft Computing*, Volume 97, Part A, 2020, 106732, ISSN 1568-4946; <https://doi.org/10.1016/j.asoc.2020.106732>
- 50** R. Silva-Valenzuela, **A. Ortiz-Bernardin**, N. Sukumar, E. Artioli, N. Hitschfeld-Kahler, "A nodal integration scheme for meshfree Galerkin methods using the virtual element decomposition," *International Journal for Numerical Methods in Engineering*, 121, 2020, 2174-2205. DOI:[10.13140/RG.2.2.15360.69123A](https://doi.org/10.13140/RG.2.2.15360.69123A)
- 51** Francis, **A. Ortiz-Bernardin**, S. P. A. Bordas, S. Natarajan, "A MINI element over star convex polytopes", *Finite Elements in Analysis and Design*, 172, 2020, 103368; <https://doi.org/10.1016/j.finel.2019.103368>
- 52** J. Torres, N. Hitschfeld, R. O. Ruiz, **A. Ortiz-Bernardin**, "Convex Polygon Packing Based Meshing Algorithm for Modeling of Rock and Porous Media." In: Krzhizhanovskaya V. et al. (eds) Computational Science – ICCS 2020. ICCS 2020. Lecture Notes in Computer Science, vol. 12141, 2020. Springer, Cham ; [https://doi.org/10.1007/978-3-030-50426-7\\_20](https://doi.org/10.1007/978-3-030-50426-7_20)
- 53** Jose Y. Aguilar-Hurtado, Alejandro Vargas-Uscategui, Katherine Paredes-Gil, **Rodrigo Palma-Hillerns**, Maria J. Tobar, Jose M. Amado, Boron addition in a non-equiatomic Fe50Mn30Co10Cr10 alloy manufactured by laser cladding: Microstructure and wear abrasive resistance, *Applied Surface Science*, Volume 515, 2020, 146084, ISSN 0169-4332, <https://doi.org/10.1016/j.apsusc.2020.146084>
- 54** Edmo Rodovalho, Osvald Quaglio, Walter Schmidt Felsch Junior, **Rodrigo Pascual**, Giorgio de Tomi, Jorge Alberto Soares Tenório. "Reducing GHG emissions through efficient tire consumption in open pit mines", *Journal of Cleaner Production*, Volume 255, 2020, 120185, ISSN 0959-6526, <https://doi.org/10.1016/j.jclepro.2020.120185>
- 55** Kristjanpoller, Fredy & Viveros, Pablo & Zio, Enrico & **Pascual, Rodrigo** & Aranda, Oscar. (2020). "Equivalent availability index for the performance measurement of haul truck fleets". *Eksplotacja i Niezagadnosc - Maintenance and Reliability*. 22. 583-591. DOI:[10.17531/ein.2020.4.1](https://doi.org/10.17531/ein.2020.4.1)
- 56** Vélez M, Toala E, **Zagal J.C.** "Koala 3D: A continuous climbing 3D printer" in *Robotics and Computer-Integrated Manufacturing*. *Robotics and Computer-Integrated Manufacturing*. 2020 Aug 1;64:101950. DOI:[10.1016/j.rcim.2020.101950](https://doi.org/10.1016/j.rcim.2020.101950)
- 57** **Zamora Zapata, M.**, Norris, J. R., & Kleissl, J. (2020). "Coastal Stratocumulus Dissipation Dependence on Initial Conditions and Boundary Forcings in a Mixed-Layer Model", *Journal of the Atmospheric Sciences*, 77(8), 2717-2741; <https://doi.org/10.1175/JAS-D-19-0254.1>