

# Luis Hã©ctor Hernã;ndez-Gã³mez

## List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Numericalâ€“Experimental Study for the Determination of the Structural Mechanical Behavior of the Wall of the Cranial Vault Using Finite Element Method and Image Correlation. Advanced Structured Materials, 2021, , 141-162.	0.3	0
2	Constant Speed Control of Slider-Crank Mechanisms: A Joint-Task Space Hybrid Control Approach. IEEE Access, 2021, 9, 65676-65687.	2.6	14
3	Comparative Study of Interferometry and Finite Element Analysis in Maxillofacial Applications (Hemimandibulectomy Type Ivc). Advanced Structured Materials, 2021, , 1-52.	0.3	1
4	Cross Flow Analysis over the Jet Pumps of a BWR-5 Reactor. Science and Technology of Nuclear Installations, 2021, 2021, 1-13.	0.3	1
5	Numerical and Experimental Analysis of a Personalized Prosthesis for a Patient with Unilateral Hip Osteoarthritis. Advanced Structured Materials, 2020, , 279-316.	0.3	2
6	Geometrical Characterization of a Lumbar Spine. Advanced Structured Materials, 2020, , 1-11.	0.3	1
7	Structural Vibrations in a Building of a Nuclear Power Plant Caused by an Underground Blasting. Advanced Structured Materials, 2020, , 81-90.	0.3	1
8	Reconstruction and Finite Element Evaluation of a Calcaneous Implant by Stereolithographic 3D Printing Technique. Advanced Structured Materials, 2020, , 397-405.	0.3	1
9	Environmental Fatigue Analysis of the Feedwater Piping System of a BWR-5. Advanced Structured Materials, 2020, , 71-80.	0.3	1
10	Review of Electromagnetic Compatibility on Digital Systems of Nuclear Power Plants. Advanced Structured Materials, 2020, , 103-113.	0.3	0
11	Characterization of Scaffold Structures for the Development of Prostheses and Biocompatible Materials. Advanced Structured Materials, 2019, , 471-494.	0.3	2
12	Design and Manufacturing of a Temporomandibular Joint (TMJ) Prosthesis for Mandibular Bone Necrosis Using the Finite Element Method. Advanced Structured Materials, 2019, , 393-439.	0.3	3
13	Analysis of the Wear Damage on Offshore Gas Turbine Blades. Advanced Structured Materials, 2019, , 221-236.	0.3	4
14	Analysis of the structural girders of a crane for the license renewal of a BWR Nuclear Power Plant. Procedia Structural Integrity, 2019, 17, 115-122.	0.3	2
15	Numerical analysis of the BWR-5 beltline region containing a crack postulated for an extended period of operation. Procedia Structural Integrity, 2019, 17, 123-130.	0.3	1
16	Chaotic Signatures Exhibited by Plasmonic Effects in Au Nanoparticles with Cells. Sensors, 2019, 19, 4728.	2.1	10
17	Identification of Stress Fields in a Customized Mandibular Reconstruction Based on a Photoelastic Model. Journal of Craniofacial Surgery, 2019, 30, 2358-2361.	0.3	3
18	Termomechanical Analysis of 3D Printing Specimens (Acrylonitrile Butadiene Styrene). Advanced Structured Materials, 2019, , 237-253.	0.3	2

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19	Design and Characterization of a Mandibular Prosthesis Prototype by Hemimandibulectomy. <i>Advanced Structured Materials</i> , 2019, , 313-343.	0.3	3
20	Design and Methodology to Produce Auxiliary Orthopedic Rehabilitation. <i>Advanced Structured Materials</i> , 2019, , 383-391.	0.3	0
21	Development of a Sensitive System to Fixed Prosthesis in the Lumbar and Cervical Orthopedic Area. <i>Advanced Structured Materials</i> , 2019, , 345-362.	0.3	0
22	Thermal-Mechanical Fatigue Analysis of a Main Steam Isolation Valve of a Boiling Water Reactor-5. <i>Lecture Notes in Mechanical Engineering</i> , 2019, , 379-389.	0.3	0
23	Design and Manufacturing of a Dry Electrode for EMG Signals Recording with Microneedles. <i>Advanced Structured Materials</i> , 2018, , 259-267.	0.3	6
24	SELECCIÓN DE MATERIAL BIOCOMPATIBLE DE BAJO COSTO PARA MANUFACTURA DE PRÓTESIS MAXILAR PERSONALIZADA. <i>Dyna (Spain)</i> , 2018, 93, 18-18.	0.1	1
25	DISEÑO ERGONÓMICO DE PRÓTESIS DE MIEMBRO INFERIOR PERSONALIZADAS APLICANDO INTELIGENCIA ARTIFICIAL. <i>Dyna (Spain)</i> , 2018, 93, 20-20.	0.1	0
26	Acoustically-controlled optical Kerr effect signals in bimetallic Au-Pt nanoparticles embedded in a TiO <sub>2</sub> thin film. <i>Optik</i> , 2017, 130, 24-31.	1.4	3
27	Sliding Mode Control of a Water-Displacement Based Mechanism Applied to the Orientation of a Parabolic-Trough Solar Concentrator. <i>Defect and Diffusion Forum</i> , 2017, 370, 90-97.	0.4	3
28	Thermal Fatigue Analysis in a High Pressure Cooling System (HPCS) Nozzle of a Boiling Water Reactor. <i>Defect and Diffusion Forum</i> , 2017, 370, 162-170.	0.4	2
29	CARACTERIZACIÓN MECÁNICA DE NUEVO MATERIAL COMPUESTO ENFOCADO HACIA APLICACIONES MAXILOFACIALES. <i>Dyna (Spain)</i> , 2017, 92, 461-465.	0.1	4
30	Cross-layer designs for energy efficient wireless body area networks: a review. <i>Revista Facultad De Ingeniería</i> , 2016, , .	0.5	3
31	Gyroscopic behavior exhibited by the optical Kerr effect in bimetallic Au-Pt nanoparticles suspended in ethanol. <i>Journal of Nanoparticle Research</i> , 2016, 18, 1.	0.8	11
32	Determination of the Mechanical Properties of Lumbar Porcine Vertebrae with 2D Digital Image Correlation. <i>Journal of Applied Biomaterials and Functional Materials</i> , 2015, 13, 195-200.	0.7	1
33	Design and Development of an Experimental Claw-Grip, Forefinger Simulator. Part I: Kinematics. <i>Advanced Structured Materials</i> , 2015, , 19-36.	0.3	1
34	An Optimization of the Manufacturing Process of Corporeal Screws Made of Synthetic Bone. <i>Advanced Structured Materials</i> , 2015, , 43-59.	0.3	3
35	Design and Manufacturing of Prosthesis of a Jaw for a Young Patient with Articular Ankylosis. <i>Advanced Structured Materials</i> , 2015, , 73-87.	0.3	4
36	Chemical and morphological characterization of <i>Agave angustifolia</i> bagasse fibers. <i>Botanical Sciences</i> , 2015, 93, 807-817.	0.3	25

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37	MODELACIÓN CON REDES DE PETRI DE LA MEJORA CONTINUA EN SISTEMAS DE PRODUCCIÓN. Dyna (Spain), 2015, 90, 19-19.	0.1	0
38	Respiration rate and mechanical properties of peach fruit during storage at three maturity stages. Journal of Food Engineering, 2014, 142, 111-117.	2.7	34
39	Study of a Novel Electronics Circuit for Detecting Faults in the IGBT. IEEE Latin America Transactions, 2014, 12, 402-409.	1.2	3
40	Biomechanical Assembled Prosthesis of a Temporo Mandibular Joint Disorder Using Biocompatible Materials. Advanced Structured Materials, 2014, , 135-146.	0.3	3
41	Numerical Study in Biomodels of Maxillofacial Prosthesis (Cancer and Osteonecrosis Cases). Advanced Structured Materials, 2014, , 59-72.	0.3	3
42	Strain Measurements Exhibited by a Steel Prosthesis Protected with Au Nanoparticles. Advanced Structured Materials, 2014, , 107-120.	0.3	1
43	Design and Manufacture of a Prototype of a Testing Rig for the Evaluation of the Biomechanical Behavior of Vertebrae. Advanced Structured Materials, 2014, , 121-134.	0.3	1
44	Three dimensional finite element model of soil compaction caused by agricultural tire traffic. Computers and Electronics in Agriculture, 2013, 99, 146-152.	3.7	26
45	Biomechanical Prosthesis Design of an Orbicular Cranial Cavity. Advanced Structured Materials, 2013, , 87-94.	0.3	8
46	Numerical Simulation on the Residual Stress Induction due to Welding Process and Assessment by the Application of the Crack Compliance Method. Advances in Mechanical Engineering, 2013, 5, 537493.	0.8	2
47	Research Advances and Perspective of Multi-Articulated and Robotic Hands. Advanced Structured Materials, 2013, , 109-128.	0.3	0
48	Using Quality Function Deployment Methodology to Translate Qualitative to Quantitative Requirements in the Design of a Knee Re-trainer. Advanced Structured Materials, 2013, , 99-107.	0.3	0
49	Optical absorptive response of platinum doped TiO2 transparent thin films with Au nanoparticles. Materials Science in Semiconductor Processing, 2012, 15, 421-427.	1.9	6
50	High resolution non-destructive evaluation of defects using artificial neural networks and wavelets. NDT and E International, 2012, 52, 69-75.	1.7	22
51	Mechanical design and manufacture by powder technology of a new mandrel tool for the fabrication of assault rifle barrels. Powder Technology, 2012, 224, 76-85.	2.1	2
52	Prediction of crack growth direction by Strain Energy Sih's Theory on specimens SEN under tension-compression biaxial loading employing Genetic Algorithms. Journal of Physics: Conference Series, 2011, 305, 012052.	0.3	0
53	Locating and classifying defects using an hybrid data base. Journal of Physics: Conference Series, 2011, 305, 012121.	0.3	0
54	Interferometric laser detection of nanomechanical perturbations in biological media under ablation conditions. Journal of Physics: Conference Series, 2011, 305, 012124.	0.3	1

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55	Residual Stresses in Beams (With and Without Prior History) Numerically Assessed by the Crack Compliance Method. <i>Strain</i> , 2011, 47, e595.	1.4	1
56	Crack-compliance method for assessing residual stress due to loading/unloading history: Numerical and experimental analysis. <i>Theoretical and Applied Fracture Mechanics</i> , 2011, 56, 188-199.	2.1	7
57	Biomechanical Characterization of a Cervical Corpectomy Using Porcine Specimens, Following an Experimental Approach. <i>Key Engineering Materials</i> , 2011, 478, 103-111.	0.4	8
58	Síntesis Genéutica de Mecanismos para Aplicaciones en Prótesis de Miembro Inferior. <i>RIAI - Revista Iberoamericana De Automatica E Informatica Industrial</i> , 2011, 8, 45-51.	0.6	1
59	Numerical and Experimental Analysis in the Manipulation of the Mechanical Properties for Enhancing the Mechanical Resistance of a Material. <i>Journal of Applied Research and Technology</i> , 2011, 9, .	0.6	2
60	Evaluation of the Impact of Residual Stresses in Crack Initiation with the Application of the Crack Compliance Method Part I, Numerical Analysis. <i>Applied Mechanics and Materials</i> , 2010, 24-25, 253-259.	0.2	2
61	Performance Optimization of GA Based Planar Mechanism Synthesis. , 2010, , .		1
62	Synthesis Optimization of Planar Mechanisms. <i>Applied Mechanics and Materials</i> , 2009, 15, 55-60.	0.2	5
63	Numerical and experimental analysis of the directional stability on crack propagation under biaxial stresses. <i>Journal of Physics: Conference Series</i> , 2009, 181, 012061.	0.3	2
64	Tensile Strength of Fibers Extracted from the Leaves of the <i>angustifolia Haw</i> Agave in Function of their Length. <i>Applied Mechanics and Materials</i> , 2009, 15, 103-108.	0.2	2
65	Numerical and experimental evaluation of the residual stress relaxation and the influence zone due to application of the crack compliance method. <i>Journal of Physics: Conference Series</i> , 2009, 181, 012069.	0.3	1
66	Biomechanical evaluation of a corpectomy in porcine lumbar specimens using flexible polymer belts. <i>Journal of Physics: Conference Series</i> , 2009, 181, 012015.	0.3	5
67	Speed Control of a DC Brush Motor with Conventional PID and Fuzzy PI Controllers. , 2008, , .		2
68	Locating and Classifying Defects with Artificial Neural Networks. <i>Applied Mechanics and Materials</i> , 2008, 13-14, 117-123.	0.2	3
69	A Neural Network Approach for Locating Multiple Defects. <i>Applied Mechanics and Materials</i> , 2008, 13-14, 125-131.	0.2	6
70	Modelling of a Cervical Plate and Human Cervical Section C3 – C5 under Compression Loading Conditions Using the Finite Element Method. <i>Applied Mechanics and Materials</i> , 2008, 13-14, 49-56.	0.2	9
71	Numerical Evaluation of the Crack Compliance Method (CCM) in Beams with and without Prior History. <i>Applied Mechanics and Materials</i> , 2008, 13-14, 173-182.	0.2	4
72	Mechanical Behavior of a Calcium Phosphate Ceramic Bone Graft Used in the Rehabilitation of a C4 Human Vertebra. <i>Applied Mechanics and Materials</i> , 2007, 7-8, 101-106.	0.2	3

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73	Locating Defects Using Dynamic Strain Analysis and Artificial Neural Networks. Applied Mechanics and Materials, 2006, 3-4, 325-330.	0.2	8
74	Dry and wet abrasive resistance of Inconel 600 and stellite. Wear, 2005, 258, 70-76.	1.5	19
75	Evaluation of crack initiation angle under mixed mode loading at diverse strain rates. Theoretical and Applied Fracture Mechanics, 2004, 42, 53-61.	2.1	8
76	Self-affine nature of the stress-strain behavior of an elastic fractal network. Physics Letters, Section A: General, Atomic and Solid State Physics, 2002, 297, 376-386.	0.9	7
77	Probabilistic mechanics of self-affine cracks in paper sheets. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 1999, 455, 2565-2575.	1.0	21
78	Experimental analysis of crack propagation stability in single edge notch specimens. Theoretical and Applied Fracture Mechanics, 1997, 28, 57-68.	2.1	2
79	Evaluation of crack propagation stability with the williams stress function <sup>II</sup> . Numerical analysis. Computers and Structures, 1997, 63, 1007-1014.	2.4	5
80	Evaluation of crack propagation stability with the williams stress function <sup>I</sup> . Stress field analysis. Computers and Structures, 1996, 61, 775-780.	2.4	5
81	Assessment of data for dynamic crack initiation under shock pressure loading: Part I <sup>experiment</sup> . Theoretical and Applied Fracture Mechanics, 1993, 19, 75-83.	2.1	4
82	Experimental evaluation of crack propagation velocity in pmma under dynamic pressure loading. International Journal of Fracture, 1993, 61, R21-R28.	1.1	4
83	Assessment of data for dynamic crack initiation under shock pressure loading: Part II <sup>Analysis</sup> . Theoretical and Applied Fracture Mechanics, 1993, 19, 85-94.	2.1	3
84	Cumulative Damage Evaluation under Fatigue Loading. Applied Mechanics and Materials, 0, 13-14, 141-150.	0.2	5
85	Biomechanics and Numerical Evaluation of Cervical Porcine Models Considering Compressive Loads Using 2-D Classic Computer Tomography CT, 3-D Scanner and 3 -D Computed Tomography. Applied Mechanics and Materials, 0, 24-25, 287-295.	0.2	13
86	Evaluation of the Impact of Residual Stresses in Crack Initiation with the Application of the Crack Compliance Method Part II, Experimental Analysis. Applied Mechanics and Materials, 0, 24-25, 261-266.	0.2	1
87	Evaluation of the Integrity of a Human Molar under Compressive Loading Using 3-D Axial Tomography. Applied Mechanics and Materials, 0, 70, 267-272.	0.2	0
88	Comparative Experimental Analysis of Different Bending Methods for the Mechanical Characterization of Materials with Previous Loading History (&lt;i>&gt;Stress-Strain Curves&lt;/i>). Advanced Materials Research, 0, 314-316, 1377-1382.	0.3	0
89	Residual Stress Interaction against Mechanical Loading during the Manufacturing Process of an Assault Rifle Component. Applied Mechanics and Materials, 0, 70, 482-487.	0.2	2
90	Evaluation of the Structural Integrity of the Jet Pumps of a Boiling Water Reactor under Hydrodynamic Loading. Defect and Diffusion Forum, 0, 348, 261-270.	0.4	6

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91	Mechanical Behavior on Cr Base Steels Surface Treatment. Defect and Diffusion Forum, 0, 365, 148-153.	0.4	1
92	Lineal Elastic Fracture Mechanics Analysis Applied for the Evaluation of the Structural Integrity of a Boiling Water Reactor Vessel Considering Neutronic Irradiation. Defect and Diffusion Forum, 0, 390, 151-160.	0.4	1
93	Analysis of the Leakage-Flow-Induced Vibration of a Slip Joint in a Jet Pump of a Boiling Water Reactor. Defect and Diffusion Forum, 0, 390, 23-31.	0.4	4
94	Fluid-Structural Interaction in a Slip Joint of a Jet Pump Assembly of a BWR-5. Defect and Diffusion Forum, 0, 399, 105-114.	0.4	1
95	Photoacoustic Spectroscopy Applied to the Study of Bone Consolidation in Fractures. Materials Science Forum, 0, , 339-344.	0.3	2
96	Redesign of a fatigue machine guide plate based on topology optimization. , 0, , 97-113.		0
97	Evaluation of the Environmental Fatigue at a Long Radius Elbow of a Piping System under Transient Thermo Mechanical Stresses. Defect and Diffusion Forum, 0, 412, 197-206.	0.4	0
98	Modeling compressor blades gas turbine in a marine environment to determine of the stress and possible damages. Revista De Ingenieria Innovativa, 0, , 20-24.	0.0	0