

# Luis Hã©ctor Hernã;ndez-Gã³mez

## List of Publications by Year in descending order

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Version: 2024-02-01

98  
papers

435  
citations

1039406

9  
h-index

940134

16  
g-index

107  
all docs

107  
docs citations

107  
times ranked

378  
citing authors

#	ARTICLE	IF	CITATIONS
1	Respiration rate and mechanical properties of peach fruit during storage at three maturity stages. <i>Journal of Food Engineering</i> , 2014, 142, 111-117.	2.7	34
2	Three dimensional finite element model of soil compaction caused by agricultural tire traffic. <i>Computers and Electronics in Agriculture</i> , 2013, 99, 146-152.	3.7	26
3	Chemical and morphological characterization of <i>Agave angustifolia</i> bagasse fibers. <i>Botanical Sciences</i> , 2015, 93, 807-817.	0.3	25
4	High resolution non-destructive evaluation of defects using artificial neural networks and wavelets. <i>NDT and E International</i> , 2012, 52, 69-75.	1.7	22
5	Probabilistic mechanics of self-affine cracks in paper sheets. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 1999, 455, 2565-2575.	1.0	21
6	Dry and wet abrasive resistance of Inconel 600 and stellite. <i>Wear</i> , 2005, 258, 70-76.	1.5	19
7	Constant Speed Control of Slider-Crank Mechanisms: A Joint-Task Space Hybrid Control Approach. <i>IEEE Access</i> , 2021, 9, 65676-65687.	2.6	14
8	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. <i>Applied Mechanics and Materials</i> , 0, 24-25, 287-295.	0.2	13
9	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
10	Chaotic Signatures Exhibited by Plasmonic Effects in Au Nanoparticles with Cells. <i>Sensors</i> , 2019, 19, 4728.	2.1	10
11	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
12	Evaluation of crack initiation angle under mixed mode loading at diverse strain rates. <i>Theoretical and Applied Fracture Mechanics</i> , 2004, 42, 53-61.	2.1	8
13	Locating Defects Using Dynamic Strain Analysis and Artificial Neural Networks. <i>Applied Mechanics and Materials</i> , 2006, 3-4, 325-330.	0.2	8
14	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
15	Biomechanical Prosthesis Design of an Orbicular Cranial Cavity. <i>Advanced Structured Materials</i> , 2013, , 87-94.	0.3	8
16	Self-affine nature of the stress-strain behavior of an elastic fractal network. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2002, 297, 376-386.	0.9	7
17	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
18	A Neural Network Approach for Locating Multiple Defects. <i>Applied Mechanics and Materials</i> , 2008, 13-14, 125-131.	0.2	6

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19	Optical absorptive response of platinum doped TiO <sub>2</sub> transparent thin films with Au nanoparticles. <i>Materials Science in Semiconductor Processing</i> , 2012, 15, 421-427.	1.9	6
20	Evaluation of the Structural Integrity of the Jet Pumps of a Boiling Water Reactor under Hydrodynamic Loading. <i>Defect and Diffusion Forum</i> , 0, 348, 261-270.	0.4	6
21	Design and Manufacturing of a Dry Electrode for EMG Signals Recording with Microneedles. <i>Advanced Structured Materials</i> , 2018, , 259-267.	0.3	6
22	Evaluation of crack propagation stability with the williams stress function. I. Stress field analysis. <i>Computers and Structures</i> , 1996, 61, 775-780.	2.4	5
23	Evaluation of crack propagation stability with the williams stress function. II. Numerical analysis. <i>Computers and Structures</i> , 1997, 63, 1007-1014.	2.4	5
24	Cumulative Damage Evaluation under Fatigue Loading. <i>Applied Mechanics and Materials</i> , 0, 13-14, 141-150.	0.2	5
25	Synthesis Optimization of Planar Mechanisms. <i>Applied Mechanics and Materials</i> , 2009, 15, 55-60.	0.2	5
26	Biomechanical evaluation of a corporectomy in porcine lumbar specimens using flexible polymer belts. <i>Journal of Physics: Conference Series</i> , 2009, 181, 012015.	0.3	5
27	Assessment of data for dynamic crack initiation under shock pressure loading: Part I. experiment. <i>Theoretical and Applied Fracture Mechanics</i> , 1993, 19, 75-83.	2.1	4
28	Experimental evaluation of crack propagation velocity in pmma under dynamic pressure loading. <i>International Journal of Fracture</i> , 1993, 61, R21-R28.	1.1	4
29	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
30	Analysis of the Wear Damage on Offshore Gas Turbine Blades. <i>Advanced Structured Materials</i> , 2019, , 221-236.	0.3	4
31	Analysis of the Leakage-Flow-Induced Vibration of a Slip Joint in a Jet Pump of a Boiling Water Reactor. <i>Defect and Diffusion Forum</i> , 0, 390, 23-31.	0.4	4
32	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
33	CARACTERIZACIÓN MECÁNICA DE NUEVO MATERIAL COMPUESTO ENFOCADO HACIA APLICACIONES MAXILOFACIALES. <i>Dyna (Spain)</i> , 2017, 92, 461-465.	0.1	4
34	Assessment of data for dynamic crack initiation under shock pressure loading: Part II. Analysis. <i>Theoretical and Applied Fracture Mechanics</i> , 1993, 19, 85-94.	2.1	3
35	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
36	Locating and Classifying Defects with Artificial Neural Networks. <i>Applied Mechanics and Materials</i> , 2008, 13-14, 117-123.	0.2	3

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37	Study of a Novel Electronics Circuit for Detecting Faults in the IGBT. IEEE Latin America Transactions, 2014, 12, 402-409.	1.2	3
38	Cross-layer designs for energy efficient wireless body area networks: a review. Revista Facultad De Ingeniería, 2016, , .	0.5	3
39	Acoustically-controlled optical Kerr effect signals in bimetallic Au-Pt nanoparticles embedded in a TiO2 thin film. Optik, 2017, 130, 24-31.	1.4	3
40	Sliding Mode Control of a Water-Displacement Based Mechanism Applied to the Orientation of a Parabolic-Trough Solar Concentrator. Defect and Diffusion Forum, 2017, 370, 90-97.	0.4	3
41	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
42	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
43	Biomechanical Assembled Prosthesis of a Temporo Mandibular Joint Disorder Using Biocompatible Materials. Advanced Structured Materials, 2014, , 135-146.	0.3	3
44	Numerical Study in Biomodels of Maxillofacial Prosthesis (Cancer and Osteonecrosis Cases). Advanced Structured Materials, 2014, , 59-72.	0.3	3
45	An Optimization of the Manufacturing Process of Corporeal Screws Made of Synthetic Bone. Advanced Structured Materials, 2015, , 43-59.	0.3	3
46	Design and Characterization of a Mandibular Prosthesis Prototype by Hemimandibulectomy. Advanced Structured Materials, 2019, , 313-343.	0.3	3
47	Experimental analysis of crack propagation stability in single edge notch specimens. Theoretical and Applied Fracture Mechanics, 1997, 28, 57-68.	2.1	2
48	Speed Control of a DC Brush Motor with Conventional PID and Fuzzy PI Controllers. , 2008, , .		2
49	Numerical and experimental analysis of the directional stability on crack propagation under biaxial stresses. Journal of Physics: Conference Series, 2009, 181, 012061.	0.3	2
50	Tensile Strength of Fibers Extracted from the Leaves of the <i>Agave angustifolia</i> Haw in Function of their Length. Applied Mechanics and Materials, 2009, 15, 103-108.	0.2	2
51	Evaluation of the Impact of Residual Stresses in Crack Initiation with the Application of the Crack Compliance Method Part I, Numerical Analysis. Applied Mechanics and Materials, 2010, 24-25, 253-259.	0.2	2
52	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
53	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
54	Thermal Fatigue Analysis in a High Pressure Cooling System (HPCS) Nozzle of a Boling Water Reactor. Defect and Diffusion Forum, 2017, 370, 162-170.	0.4	2

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55	Characterization of Scaffold Structures for the Development of Prostheses and Biocompatible Materials. <i>Advanced Structured Materials</i> , 2019, , 471-494.	0.3	2
56	Analysis of the structural girders of a crane for the license renewal of a BWR Nuclear Power Plant. <i>Procedia Structural Integrity</i> , 2019, 17, 115-122.	0.3	2
57	Numerical and Experimental Analysis of a Personalized Prosthesis for a Patient with Unilateral Hip Osteoarthritis. <i>Advanced Structured Materials</i> , 2020, , 279-316.	0.3	2
58	Termomechanical Analysis of 3D Printing Specimens (Acrylonitrile Butadiene Styrene). <i>Advanced Structured Materials</i> , 2019, , 237-253.	0.3	2
59	Numerical Simulation on the Residual Stress Induction due to Welding Process and Assessment by the Application of the Crack Compliance Method. <i>Advances in Mechanical Engineering</i> , 2013, 5, 537493.	0.8	2
60	Photoacoustic Spectroscopy Applied to the Study of Bone Consolidation in Fractures. <i>Materials Science Forum</i> , 0, , 339-344.	0.3	2
61	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
62	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
63	Evaluation of the Impact of Residual Stresses in Crack Initiation with the Application of the Crack Compliance Method Part II, Experimental Analysis. <i>Applied Mechanics and Materials</i> , 0, 24-25, 261-266.	0.2	1
64	Performance Optimization of GA Based Planar Mechanism Synthesis. , 2010, , .		1
65	Interferometric laser detection of nanomechanical perturbations in biological media under ablation conditions. <i>Journal of Physics: Conference Series</i> , 2011, 305, 012124.	0.3	1
66	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
67	Mechanical Behavior on Cr Base Steels Surface Treatment. <i>Defect and Diffusion Forum</i> , 0, 365, 148-153.	0.4	1
68	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
69	Design and Development of an Experimental Claw-Grip, Forefinger Simulator. Part I: Kinematics. <i>Advanced Structured Materials</i> , 2015, , 19-36.	0.3	1
70	Numerical analysis of the BWR-5 beltline region containing a crack postulated for an extended period of operation. <i>Procedia Structural Integrity</i> , 2019, 17, 123-130.	0.3	1
71	Lineal Elastic Fracture Mechanics Analysis Applied for the Evaluation of the Structural Integrity of a Boiling Water Reactor Vessel Considering Neutronic Irradiation. <i>Defect and Diffusion Forum</i> , 0, 390, 151-160.	0.4	1
72	Fluid-Structural Interaction in a Slip Joint of a Jet Pump Assembly of a BWR-5. <i>Defect and Diffusion Forum</i> , 0, 399, 105-114.	0.4	1

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73	Comparative Study of Interferometry and Finite Element Analysis in Maxillofacial Applications (Hemimandibulectomy Type IVc). <i>Advanced Structured Materials</i> , 2021, , 1-52.	0.3	1
74	Cross Flow Analysis over the Jet Pumps of a BWR-5 Reactor. <i>Science and Technology of Nuclear Installations</i> , 2021, 2021, 1-13.	0.3	1
75	Geometrical Characterization of a Lumbar Spine. <i>Advanced Structured Materials</i> , 2020, , 1-11.	0.3	1
76	Structural Vibrations in a Building of a Nuclear Power Plant Caused by an Underground Blasting. <i>Advanced Structured Materials</i> , 2020, , 81-90.	0.3	1
77	SELECCIÓN DE MATERIAL BIOCOMPATIBLE DE BAJO COSTO PARA MANUFACTURA DE PRÓTESIS MAXILAR PERSONALIZADA. <i>Dyna (Spain)</i> , 2018, 93, 18-18.	0.1	1
78	Síntesis Genética 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
79	Strain Measurements Exhibited by a Steel Prosthesis Protected with Au Nanoparticles. <i>Advanced Structured Materials</i> , 2014, , 107-120.	0.3	1
80	Design and Manufacture of a Prototype of a Testing Rig for the Evaluation of the Biomechanical Behavior of Vertebrae. <i>Advanced Structured Materials</i> , 2014, , 121-134.	0.3	1
81	Reconstruction and Finite Element Evaluation of a Calcaneous Implant by Stereolithographic 3D Printing Technique. <i>Advanced Structured Materials</i> , 2020, , 397-405.	0.3	1
82	Environmental Fatigue Analysis of the Feedwater Piping System of a BWR-5. <i>Advanced Structured Materials</i> , 2020, , 71-80.	0.3	1
83	Prediction of crack growth direction by Strain Energy Sih's Theory on specimens SEN under tension-compression biaxial loading employing Genetic Algorithms. <i>Journal of Physics: Conference Series</i> , 2011, 305, 012052.	0.3	0
84	Locating and classifying defects using an hybrid data base. <i>Journal of Physics: Conference Series</i> , 2011, 305, 012121.	0.3	0
85	Evaluation of the Integrity of a Human Molar under Compressive Loading Using 3-D Axial Tomography. <i>Applied Mechanics and Materials</i> , 0, 70, 267-272.	0.2	0
86	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&gt;). <i>Advanced Materials Research</i> , 0, 314-316, 1377-1382.	0.3	0
87	Numerical&quot;Experimental Study for the Determination of the Structural Mechanical Behavior of the Wall of the Cranial Vault Using Finite Element Method and Image Correlation. <i>Advanced Structured Materials</i> , 2021, , 141-162.	0.3	0
88	Research Advances and Perspective of Multi-Articulated and Robotic Hands. <i>Advanced Structured Materials</i> , 2013, , 109-128.	0.3	0
89	Using Quality Function Deployment Methodology to Translate Qualitative to Quantitative Requirements in the Design a of a Knee Re-trainer. <i>Advanced Structured Materials</i> , 2013, , 99-107.	0.3	0
90	MODELACIÓN CON REDES DE PETRI DE LA MEJORA CONTINUA EN SISTEMAS DE PRODUCCIÓN. <i>Dyna (Spain)</i> , 2015, 90, 19-19.	0.1	0

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91	DISEÑO ERGONÓMICO DE PRÓTESIS DE MIEMBRO INFERIOR PERSONALIZADAS APLICANDO INTELIGENCIA ARTIFICIAL. Dyna (Spain), 2018, 93, 20-20.	0.1	0
92	Design and Methodology to Produce Auxiliary Orthopedic Rehabilitation. Advanced Structured Materials, 2019, , 383-391.	0.3	0
93	Development of a Sensitive System to Fixed Prosthesis in the Lumbar and Cervical Orthopedic Area. Advanced Structured Materials, 2019, , 345-362.	0.3	0
94	Thermal-Mechanical Fatigue Analysis of a Main Steam Isolation Valve of a Boiling Water Reactor-5. Lecture Notes in Mechanical Engineering, 2019, , 379-389.	0.3	0
95	Review of Electromagnetic Compatibility on Digital Systems of Nuclear Power Plants. Advanced Structured Materials, 2020, , 103-113.	0.3	0
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