

Pablo A Tarazaga

List of Publications by Year in descending order

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106
papers

840
citations

516710

16
h-index

610901

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115
all docs

115
docs citations

115
times ranked

474
citing authors

#	ARTICLE	IF	CITATIONS
1	Self-sensing active artificial hair cells inspired by the cochlear amplifier, Part I: Theoretical and numerical realization. <i>Journal of Intelligent Material Systems and Structures</i> , 2023, 34, 177-193.	2.5	1
2	Toward Developing Arrays of Active Artificial Hair Cells. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2022, , 75-80.	0.5	3
3	Maximum likelihood estimation for passive energy-based footstep localization. <i>Mechanical Systems and Signal Processing</i> , 2022, 163, 108158.	8.0	2
4	Leveraging a data-driven approach to simulate and experimentally validate a MIMO multiphysics vibroacoustic system. <i>Mechanical Systems and Signal Processing</i> , 2022, 166, 108414.	8.0	3
5	A study on steady-state traveling waves in one-dimensional non-dispersive finite media. <i>Journal of Sound and Vibration</i> , 2022, 528, 116907.	3.9	2
6	Wavelet-based dynamic mode decomposition. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021, 20, e202000355.	0.2	2
7	Towards secure cyber-physical information association for parts. <i>Journal of Manufacturing Systems</i> , 2021, 59, 27-41.	13.9	10
8	Clamping Force Effects on the Performance of Mechanically Attached Piezoelectric Transducers for Impedance-Based NDE. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2020, , 355-363.	0.5	1
9	Generating Anechoic Traveling Wave in Beams with Various Boundary Conditions. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2020, , 387-393.	0.5	0
10	Electromechanical Impedance Method for Applications in Boundary Condition Replication. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2020, , 93-96.	0.5	2
11	Recreating Periodic Events: Characterizing Footsteps in a Continuous Walking Signal. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2020, , 231-235.	0.5	0
12	Modal Analysis of Rotating Tires in Stationary and Rotating Frames of Reference. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2020, , 285-291.	0.5	1
13	Study on Developing Micro-Scale Artificial Hair Cells. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2020, , 95-99.	0.5	4
14	A Theoretical Study on the Generation and Propagation of Traveling Waves in Strings. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2020, , 311-316.	0.5	0
15	Generating and tailoring Structure-Borne Traveling Waves on two-dimensional surfaces. <i>Journal of Sound and Vibration</i> , 2020, 480, 115417.	3.9	8
16	Estimating dispersion curves from Frequency Response Functions via Vector-Fitting. <i>Mechanical Systems and Signal Processing</i> , 2020, 140, 106597.	8.0	12
17	A passive energy-based method for footstep impact localization, using an underfloor accelerometer sensor network with Kalman filtering. <i>JVC/Journal of Vibration and Control</i> , 2020, 26, 941-951.	2.6	9
18	On Wave Propagation in Smart Buildings. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2020, , 237-242.	0.5	0

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19	Event Detection and Localization Using Machine Learning on a Staircase. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 219-223.	0.5	0
20	Modal Parameter Uncertainty Estimates as a Tool for Automated Operational Modal Analysis: Applications to a Smart Building. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 177-182.	0.5	2
21	Turbulent Boundary Layer over a Piezoelectrically Excited Traveling Wave Surface. , 2019, , .		4
22	In situ monitoring of material jetting additive manufacturing process via impedance based measurements. Additive Manufacturing, 2019, 28, 456-463.	3.0	20
23	Cochlear amplifier inspired two-channel active artificial hair cells. Mechanical Systems and Signal Processing, 2019, 129, 568-589.	8.0	8
24	A new fast and calibration-free method for footstep impact localization in an instrumented floor. JVC/Journal of Vibration and Control, 2019, 25, 1629-1638.	2.6	8
25	Repeatable part authentication using impedance based analysis for side-channel monitoring. Journal of Manufacturing Systems, 2019, 51, 42-51.	13.9	11
26	Vibration-based gait analysis via instrumented buildings. International Journal of Distributed Sensor Networks, 2019, 15, 155014771988160.	2.2	19
27	Evaluation of a New Energy-Based Human Tracking Method in a Smart Building Using Floor Vibration Measurements. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 289-292.	0.5	5
28	Bio-inspired Nonlinear Control of Artificial Hair Cells. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 179-184.	0.5	2
29	Classification of Human Walking Patterns through Singular Value Decomposition Projection. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 273-278.	0.5	0
30	Impact localization in dispersive waveguides based on energy-attenuation of waves with the traveled distance. Mechanical Systems and Signal Processing, 2018, 105, 361-376.	8.0	25
31	Investigating the use of multi-point coupling for single-sensor bearing estimation in one direction. Journal of Sound and Vibration, 2018, 419, 33-41.	3.9	0
32	Thermal morphing anisogrid smart space structures part 2: Ranking of geometric parameter importance, trust region optimization, and performance evaluation. JVC/Journal of Vibration and Control, 2018, 24, 2873-2893.	2.6	6
33	Thermal morphing anisogrid smart space structures: Part 1. Introduction, modeling, and performance of the novel smart structural application. JVC/Journal of Vibration and Control, 2018, 24, 2853-2872.	2.6	4
34	Improved model correlation through optimal parameter ranking using model reduction algorithms: Augmenting engineering judgment. JVC/Journal of Vibration and Control, 2018, 24, 4716-4739.	2.6	3
35	Data-Driven Modeling Techniques to Estimate Dispersion Relations of Structural Components. , 2018, , .		1
36	Traveling Waves As a De-Powdering Process for Additively Manufactured Parts. , 2018, , .		1

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37	Investigation of Elastic Meta-Structures With Periodic Localized Stress-Fields. , 2018, , .		0
38	High resolution operational modal analysis on a five-story smart building under wind and human induced excitation. Engineering Structures, 2018, 176, 279-292.	5.3	30
39	Dynamic analysis of a piezoelectric augmented beam system with adhesive bonding layer effects. Journal of Intelligent Material Systems and Structures, 2017, 28, 178-194.	2.5	14
40	Electromechanical impedance-based damage characterization using spectral element method. Journal of Intelligent Material Systems and Structures, 2017, 28, 63-77.	2.5	20
41	Dynamic model reduction using data-driven Loewner-framework applied to thermally morphing structures. Journal of Sound and Vibration, 2017, 396, 274-288.	3.9	7
42	Investigation of propulsive characteristics due to traveling waves in continuous finite media. Proceedings of SPIE, 2017, , .	0.8	4
43	Investigation into the superposition of multiple mode shape composed traveling waves. Proceedings of SPIE, 2017, , .	0.8	4
44	Skin friction drag reduction in turbulent flow using spanwise traveling surface waves. Proceedings of SPIE, 2017, , .	0.8	1
45	Indoor footstep localization from structural dynamics instrumentation. Mechanical Systems and Signal Processing, 2017, 88, 224-239.	8.0	43
46	MEMS scale artificial hair cell sensors inspired by the cochlear amplifier effect. , 2017, , .		3
47	Impedance-based non-destructive evaluation of additively manufactured parts. Rapid Prototyping Journal, 2017, 23, 589-601.	3.2	27
48	Application of projection-based model reduction to finite-element plate models for two-dimensional traveling waves. Journal of Intelligent Material Systems and Structures, 2017, 28, 1886-1904.	2.5	11
49	An experimental and theoretical study of two-dimensional traveling waves in plates. Journal of Intelligent Material Systems and Structures, 2017, 28, 1803-1815.	2.5	28
50	Artificial hair cells inspired by active hair bundle motility. Journal of Intelligent Material Systems and Structures, 2017, 28, 1816-1831.	2.5	8
51	Internal Porosity Detection in Additively Manufactured Parts via Electromechanical Impedance Measurements. , 2017, , .		3
52	Modal analysis of a loaded tire with non-contact measurements and piezoelectric excitation. , 2017, , .		2
53	A study of active artificial hair cell models inspired by outer hair cell somatic motility. Journal of Intelligent Material Systems and Structures, 2017, 28, 811-823.	2.5	12
54	Acoustoelastic-Based Stress Measurement Utilizing Low-Frequency Flexural Waves. , 2017, , .		0

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55	A Framework for Occupancy Tracking in a Building via Structural Dynamics Sensing of Footstep Vibrations. <i>Frontiers in Built Environment</i> , 2017, 3, .	2.3	14
56	Classification of event location using matched filters via on-floor accelerometers. <i>Proceedings of SPIE</i> , 2017, , .	0.8	3
57	Operational modal analysis of a steel-frame, low-rise building with L-shaped construction. , 2017, , .		2
58	Evaluation of a new source localization method in a simulated dispersive plate. <i>Proceedings of SPIE</i> , 2017, , .	0.8	2
59	In-field implementation of impedance-based structural health monitoring for insulated rail joints. , 2017, , .		0
60	The effects of bonding layer on the high-frequency dynamic response of piezoelectric augmented structures. <i>Proceedings of SPIE</i> , 2017, , .	0.8	0
61	Indoor positioning from vibration localization in smart buildings. , 2016, , .		13
62	Gender Classification of Walkers via Underfloor Accelerometer Measurements. <i>IEEE Internet of Things Journal</i> , 2016, 3, 1259-1266.	8.7	39
63	Theoretical and experimental correlation of mechanical wave formation on beams. <i>Journal of Intelligent Material Systems and Structures</i> , 2016, 27, 1939-1948.	2.5	30
64	Optimal Parameter Identification for Model Correlation Using Model Reduction Methods. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2016, , 281-292.	0.5	5
65	A Novel Acoustoelastic-Based Technique for Stress Measurement in Structural Components. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2016, , 49-56.	0.5	1
66	Assessment of Large Error Time-Differences for Localization in a Plate Simulation. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2016, , 369-376.	0.5	3
67	Measuring Violin Bow Force During Performance. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2016, , 37-46.	0.5	1
68	A Neural Network Approach to 3D Printed Surrogate Systems. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2016, , 215-222.	0.5	0
69	Estimating Noise Spectra for Data from an Instrumented Building. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2016, , 91-105.	0.5	1
70	Non-Linear Impedance-Based Structural Health Monitoring for Damage Detection and Identification. , 2015, , .		0
71	Reduced Plate Model Used for 2D Traveling Wave Propagation. , 2015, , .		3
72	Traveling Wave Phenomenon Through Piezoelectric Actuation of a Free-Free Cylindrical Tube. , 2015, , .		6

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73	Active Artificial Hair Cells for Use in Fluid Environments. , 2015, , .		3
74	Trojan Detection and Side-channel Analyses for Cyber-security in Cyber-physical Manufacturing Systems. Procedia Manufacturing, 2015, 1, 77-85.	1.9	53
75	Developing an active artificial hair cell using nonlinear feedback control. Smart Materials and Structures, 2015, 24, 094004.	3.5	17
76	Experimental Implementation of Opposed Shape Memory Alloy Wires for Actuator Control. Journal of Vibration and Acoustics, Transactions of the ASME, 2015, 137, .	1.6	6
77	ANFIS Driven Strain Control of Thin-Shape Memory Alloy Wires Using Seebeck Voltage of a Shape Memory Alloyâ€™Constantan Thermocouple. Journal of Vibration and Acoustics, Transactions of the ASME, 2015, 137, .	1.6	3
78	Towards Use And Reuse Driven Big Data Management. , 2015, , .		7
79	Towards indoor localization of pedestrians via smart building vibration sensing. , 2015, , .		25
80	On-Demand Big Data Analysis in Digital Repositories: A Lightweight Approach. Lecture Notes in Computer Science, 2015, , 274-277.	1.3	1
81	Active Artificial Hair Cells Using Nonlinear Feedback Control. , 2014, , .		6
82	Vehicle Propulsion by Solid State Motion. , 2014, , .		5
83	Mimicking the cochlear amplifier in a cantilever beam using nonlinear velocity feedback control. Smart Materials and Structures, 2014, 23, 075019.	3.5	21
84	Experimental validation of the vibro-acoustic model of a pressurized membrane. Mechanical Systems and Signal Processing, 2014, 45, 330-345.	8.0	5
85	Travelling Wave Phenomenon Through a Piezoelectric Actuation on a Free-Free Beam. , 2014, , .		6
86	Continuous Scanning for Acoustic Field Characterization. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 625-636.	0.5	1
87	Parametric Study of a Continuous Scanning Method Used to Characterize an Acoustic Field. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 341-349.	0.5	0
88	Non-contact point excitation of ultra lightweight structures: membranes. , 2013, , .		0
89	Experimental Implementation of Opposed SMA Wires for Actuator Control. , 2013, , .		0
90	Artificial Cochlear Hair Cells Using Active Piezoelectric Materials. , 2013, , .		6

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91	Modeling of Hysteretic Effects of SMA using Neuro Fuzzy Inference System. , 2013, , .		1
92	Design and Characterization of Piezo-Based Stereocilia. , 2013, , .		0
93	Control of Strain Characteristics of SMA Wires Using Seebeck Voltage. , 2013, , .		2
94	Continuous Laser Scanning of a Lightweight Membrane with Monotone and Multi-tone Excitation Techniques. , 2012, , .		3
95	Sensorless Control of SMA Using Seebeck Voltage. , 2012, , .		2
96	Vibro-acoustics of a pressurized optical membrane. Mechanical Systems and Signal Processing, 2012, 30, 373-392.	8.0	10
97	Modeling and Vibration Suppression of Pressurized Optical Membrane. , 2008, , .		0
98	Control of a Space Rigidizable Inflatable Boom Using Macro-fiber Composite Actuators. JVC/Journal of Vibration and Control, 2007, 13, 935-950.	2.6	39
99	Frequency Range Selection for Impedance-Based Structural Health Monitoring. Journal of Vibration and Acoustics, Transactions of the ASME, 2007, 129, 701-709.	1.6	36
100	A New Approach for Changing Structural Properties of a Membrane Mirror Strip for Adaptive Optics Applications. , 2007, , 1809.		0
101	Control of a Space Rigidizable-Inflatable Boom Using Embedded Piezoelectric Composite Actuators. , 2006, , .		3
102	Laser vibrometry measurements for dynamic testing of an inflatable strut. , 2006, , .		3
103	Structural health monitoring of an inflatable boom subjected to simulated micrometeoroid/orbital debris damage. , 2006, , .		6
104	Modeling of a Membrane Mirror Strip Actuated Using a Piezoelectric Bimorph. , 2006, , .		4
105	Model Updating Using a Quadratic Form. , 2005, , .		1
106	Modal Analysis of an Ultra-Flexible, Self-Rigidizing Toroidal Satellite Component. , 2004, , 671.		6