

# Pablo A Tarazaga

## List of Publications by Year in descending order

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Version: 2024-02-01

106  
papers

840  
citations

516710

16  
h-index

610901

24  
g-index

115  
all docs

115  
docs citations

115  
times ranked

474  
citing authors

#	ARTICLE	IF	CITATIONS
1	Trojan Detection and Side-channel Analyses for Cyber-security in Cyber-physical Manufacturing Systems. <i>Procedia Manufacturing</i> , 2015, 1, 77-85.	1.9	53
2	Indoor footstep localization from structural dynamics instrumentation. <i>Mechanical Systems and Signal Processing</i> , 2017, 88, 224-239.	8.0	43
3	Control of a Space Rigidizable Inflatable Boom Using Macro-fiber Composite Actuators. <i>JVC/Journal of Vibration and Control</i> , 2007, 13, 935-950.	2.6	39
4	Gender Classification of Walkers via Underfloor Accelerometer Measurements. <i>IEEE Internet of Things Journal</i> , 2016, 3, 1259-1266.	8.7	39
5	Frequency Range Selection for Impedance-Based Structural Health Monitoring. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2007, 129, 701-709.	1.6	36
6	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
7	High resolution operational modal analysis on a five-story smart building under wind and human induced excitation. <i>Engineering Structures</i> , 2018, 176, 279-292.	5.3	30
8	An experimental and theoretical study of two-dimensional traveling waves in plates. <i>Journal of Intelligent Material Systems and Structures</i> , 2017, 28, 1803-1815.	2.5	28
9	Impedance-based non-destructive evaluation of additively manufactured parts. <i>Rapid Prototyping Journal</i> , 2017, 23, 589-601.	3.2	27
10	Towards indoor localization of pedestrians via smart building vibration sensing. , 2015, , .		25
11	Impact localization in dispersive waveguides based on energy-attenuation of waves with the traveled distance. <i>Mechanical Systems and Signal Processing</i> , 2018, 105, 361-376.	8.0	25
12	Mimicking the cochlear amplifier in a cantilever beam using nonlinear velocity feedback control. <i>Smart Materials and Structures</i> , 2014, 23, 075019.	3.5	21
13	Electromechanical impedance-based damage characterization using spectral element method. <i>Journal of Intelligent Material Systems and Structures</i> , 2017, 28, 63-77.	2.5	20
14	In situ monitoring of material jetting additive manufacturing process via impedance based measurements. <i>Additive Manufacturing</i> , 2019, 28, 456-463.	3.0	20
15	Vibration-based gait analysis via instrumented buildings. <i>International Journal of Distributed Sensor Networks</i> , 2019, 15, 155014771988160.	2.2	19
16	Developing an active artificial hair cell using nonlinear feedback control. <i>Smart Materials and Structures</i> , 2015, 24, 094004.	3.5	17
17	Dynamic analysis of a piezoelectric augmented beam system with adhesive bonding layer effects. <i>Journal of Intelligent Material Systems and Structures</i> , 2017, 28, 178-194.	2.5	14
18	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

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19	Indoor positioning from vibration localization in smart buildings. , 2016, , .		13
20	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
21	Estimating dispersion curves from Frequency Response Functions via Vector-Fitting. Mechanical Systems and Signal Processing, 2020, 140, 106597.	8.0	12
22	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
23	Repeatable part authentication using impedance based analysis for side-channel monitoring. Journal of Manufacturing Systems, 2019, 51, 42-51.	13.9	11
24	Vibro-acoustics of a pressurized optical membrane. Mechanical Systems and Signal Processing, 2012, 30, 373-392.	8.0	10
25	Towards secure cyber-physical information association for parts. Journal of Manufacturing Systems, 2021, 59, 27-41.	13.9	10
26	A passive energy-based method for footstep impact localization, using an underfloor accelerometer sensor network with Kalman filtering. JVC/Journal of Vibration and Control, 2020, 26, 941-951.	2.6	9
27	Artificial hair cells inspired by active hair bundle motility. Journal of Intelligent Material Systems and Structures, 2017, 28, 1816-1831.	2.5	8
28	Cochlear amplifier inspired two-channel active artificial hair cells. Mechanical Systems and Signal Processing, 2019, 129, 568-589.	8.0	8
29	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
30	Generating and tailoring Structure-Borne Traveling Waves on two-dimensional surfaces. Journal of Sound and Vibration, 2020, 480, 115417.	3.9	8
31	Towards Use And Reuse Driven Big Data Management. , 2015, , .		7
32	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
33	Modal Analysis of an Ultra-Flexible, Self-Rigidizing Toroidal Satellite Component. , 2004, , 671.		6
34	Structural health monitoring of an inflatable boom subjected to simulated micrometeoroid/orbital debris damage. , 2006, , .		6
35	Artificial Cochlear Hair Cells Using Active Piezoelectric Materials. , 2013, , .		6
36	Active Artificial Hair Cells Using Nonlinear Feedback Control. , 2014, , .		6

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37	Travelling Wave Phenomenon Through a Piezoelectric Actuation on a Free-Free Beam. , 2014, , .		6
38	Traveling Wave Phenomenon Through Piezoelectric Actuation of a Free-Free Cylindrical Tube. , 2015, , .		6
39	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
40	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
41	Vehicle Propulsion by Solid State Motion. , 2014, , .		5
42	Experimental validation of the vibro-acoustic model of a pressurized membrane. Mechanical Systems and Signal Processing, 2014, 45, 330-345.	8.0	5
43	Optimal Parameter Identification for Model Correlation Using Model Reduction Methods. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 281-292.	0.5	5
44	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
45	Investigation of propulsive characteristics due to traveling waves in continuous finite media. Proceedings of SPIE, 2017, , .	0.8	4
46	Investigation into the superposition of multiple mode shape composed traveling waves. Proceedings of SPIE, 2017, , .	0.8	4
47	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
48	Turbulent Boundary Layer over a Piezoelectrically Excited Traveling Wave Surface. , 2019, , .		4
49	Study on Developing Micro-Scale Artificial Hair Cells. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 95-99.	0.5	4
50	Modeling of a Membrane Mirror Strip Actuated Using a Piezoelectric Bimorph. , 2006, , .		4
51	Control of a Space Rigidizable-Inflatable Boom Using Embedded Piezoelectric Composite Actuators. , 2006, , .		3
52	Laser vibrometry measurements for dynamic testing of an inflatable strut. , 2006, , .		3
53	Continuous Laser Scanning of a Lightweight Membrane with Monotone and Multi-tone Excitation Techniques. , 2012, , .		3
54	Reduced Plate Model Used for 2D Traveling Wave Propagation. , 2015, , .		3

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55	Active Artificial Hair Cells for Use in Fluid Environments. , 2015, , .		3
56	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
57	MEMS scale artificial hair cell sensors inspired by the cochlear amplifier effect. , 2017, , .		3
58	Internal Porosity Detection in Additively Manufactured Parts via Electromechanical Impedance Measurements. , 2017, , .		3
59	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
60	Toward Developing Arrays of Active Artificial Hair Cells. Conference Proceedings of the Society for Experimental Mechanics, 2022, , 75-80.	0.5	3
61	Leveraging a data-driven approach to simulate and experimentally validate a MIMO multiphysics vibroacoustic system. Mechanical Systems and Signal Processing, 2022, 166, 108414.	8.0	3
62	Assessment of Large Error Time-Differences for Localization in a Plate Simulation. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 369-376.	0.5	3
63	Classification of event location using matched filters via on-floor accelerometers. Proceedings of SPIE, 2017, , .	0.8	3
64	Sensorless Control of SMA Using Seebeck Voltage. , 2012, , .		2
65	Modal analysis of a loaded tire with non-contact measurements and piezoelectric excitation. , 2017, , .		2
66	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
67	Electromechanical Impedance Method for Applications in Boundary Condition Replication. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 93-96.	0.5	2
68	Waveletâ€™based dynamic mode decomposition. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000355.	0.2	2
69	Maximum likelihood estimation for passive energy-based footstep localization. Mechanical Systems and Signal Processing, 2022, 163, 108158.	8.0	2
70	Control of Strain Characteristics of SMA Wires Using Seebeck Voltage. , 2013, , .		2
71	Operational modal analysis of a steel-frame, low-rise building with L-shaped construction. , 2017, , .		2
72	Evaluation of a new source localization method in a simulated dispersive plate. Proceedings of SPIE, 2017, , .	0.8	2

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73	Bio-inspired Nonlinear Control of Artificial Hair Cells. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 179-184.	0.5	2
74	A study on steady-state traveling waves in one-dimensional non-dispersive finite media. Journal of Sound and Vibration, 2022, 528, 116907.	3.9	2
75	Modeling of Hysteretic Effects of SMA using Neuro Fuzzy Inference System. , 2013, , .		1
76	Skin friction drag reduction in turbulent flow using spanwise traveling surface waves. Proceedings of SPIE, 2017, , .	0.8	1
77	Data-Driven Modeling Techniques to Estimate Dispersion Relations of Structural Components. , 2018, , .		1
78	Traveling Waves As a De-Powdering Process for Additively Manufactured Parts. , 2018, , .		1
79	Clamping Force Effects on the Performance of Mechanically Attached Piezoelectric Transducers for Impedance-Based NDE. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 355-363.	0.5	1
80	Modal Analysis of Rotating Tires in Stationary and Rotating Frames of Reference. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 285-291.	0.5	1
81	A Novel Acoustoelastic-Based Technique for Stress Measurement in Structural Components. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 49-56.	0.5	1
82	Model Updating Using a Quadratic Form. , 2005, , .		1
83	Continuous Scanning for Acoustic Field Characterization. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 625-636.	0.5	1
84	On-Demand Big Data Analysis in Digital Repositories: A Lightweight Approach. Lecture Notes in Computer Science, 2015, , 274-277.	1.3	1
85	Measuring Violin Bow Force During Performance. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 37-46.	0.5	1
86	Estimating Noise Spectra for Data from an Instrumented Building. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 91-105.	0.5	1
87	Self-sensing active artificial hair cells inspired by the cochlear amplifier, Part I: Theoretical and numerical realization. Journal of Intelligent Material Systems and Structures, 2023, 34, 177-193.	2.5	1
88	A New Approach for Changing Structural Properties of a Membrane Mirror Strip for Adaptive Optics Applications. , 2007, , 1809.		0
89	Non-contact point excitation of ultra lightweight structures: membranes. , 2013, , .		0
90	Experimental Implementation of Opposed SMA Wires for Actuator Control. , 2013, , .		0

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91	Design and Characterization of Piezo-Based Stereocilia. , 2013, , .		0
92	Non-Linear Impedance-Based Structural Health Monitoring for Damage Detection and Identification. , 2015, , .		0
93	Acoustoelastic-Based Stress Measurement Utilizing Low-Frequency Flexural Waves. , 2017, , .		0
94	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
95	Investigation of Elastic Meta-Structures With Periodic Localized Stress-Fields. , 2018, , .		0
96	Generating Anechoic Traveling Wave in Beams with Various Boundary Conditions. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 387-393.	0.5	0
97	Recreating Periodic Events: Characterizing Footsteps in a Continuous Walking Signal. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 231-235.	0.5	0
98	A Theoretical Study on the Generation and Propagation of Traveling Waves in Strings. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 311-316.	0.5	0
99	Modeling and Vibration Suppression of Pressurized Optical Membrane. , 2008, , .		0
100	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
101	A Neural Network Approach to 3D Printed Surrogate Systems. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 215-222.	0.5	0
102	In-field implementation of impedance-based structural health monitoring for insulated rail joints. , 2017, , .		0
103	The effects of bonding layer on the high-frequency dynamic response of piezoelectric augmented structures. Proceedings of SPIE, 2017, , .	0.8	0
104	Classification of Human Walking Patterns through Singular Value Decomposition Projection. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 273-278.	0.5	0
105	On Wave Propagation in Smart Buildings. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 237-242.	0.5	0
106	Event Detection and Localization Using Machine Learning on a Staircase. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 219-223.	0.5	0