

Valentina Zega

List of Publications by Year in descending order

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45
papers

695
citations

516561

16
h-index

552653

26
g-index

45
all docs

45
docs citations

45
times ranked

577
citing authors

#	ARTICLE	IF	CITATIONS
1	3D auxetic single material periodic structure with ultra-wide tunable bandgap. Scientific Reports, 2018, 8, 2262.	1.6	96
2	Self-induced parametric amplification arising from nonlinear elastic coupling in a micromechanical resonating disk gyroscope. Scientific Reports, 2015, 5, 9036.	1.6	91
3	High Scale-Factor Stability Frequency-Modulated MEMS Gyroscope: 3-Axis Sensor and Integrated Electronics Design. IEEE Transactions on Industrial Electronics, 2018, 65, 5040-5050.	5.2	48
4	Synthesis of auxetic structures using optimization of compliant mechanisms and a micropolar material model. Structural and Multidisciplinary Optimization, 2017, 55, 1-12.	1.7	35
5	The First 3D-Printed and Wet-Metallized Three-Axis Accelerometer With Differential Capacitive Sensing. IEEE Sensors Journal, 2019, 19, 9131-9138.	2.4	30
6	The First 3-D-Printed z-Axis Accelerometers With Differential Capacitive Sensing. IEEE Sensors Journal, 2018, 18, 53-60.	2.4	28
7	Dynamic nonlinear behavior of torsional resonators in MEMS. Journal of Micromechanics and Microengineering, 2014, 24, 095025.	1.5	26
8	A metaplate for complete 3D vibration isolation. European Journal of Mechanics, A/Solids, 2020, 84, 104016.	2.1	24
9	Sensitivity and temperature behavior of a novel <i>z</i> -axis differential resonant micro accelerometer. Journal of Micromechanics and Microengineering, 2016, 26, 035006.	1.5	23
10	Dynamic mechanical characterization of two-photon-polymerized SZ2080 photoresist. Journal of Applied Physics, 2020, 128, .	1.1	23
11	A new MEMS three-axial frequency-modulated (FM) gyroscope: a mechanical perspective. European Journal of Mechanics, A/Solids, 2018, 70, 203-212.	2.1	22
12	Reduced order modelling and experimental validation of a MEMS gyroscope test-structure exhibiting 1:2 internal resonance. Scientific Reports, 2021, 11, 16390.	1.6	22
13	Analysis of Frequency Stability and Thermoelastic Effects for Slotted Tuning Fork MEMS Resonators. Sensors, 2018, 18, 2157.	2.1	20
14	Non-linear mechanics in resonant inertial micro sensors. International Journal of Non-Linear Mechanics, 2020, 120, 103386.	1.4	19
15	A Differential Resonant Micro Accelerometer for Out-of-plane Measurements. Procedia Engineering, 2014, 87, 640-643.	1.2	17
16	Predicting the closed-loop stability and oscillation amplitude of nonlinear parametrically amplified oscillators. Applied Physics Letters, 2015, 106, .	1.5	17
17	Design, Fabrication and Experimental Validation of a Metaplate for Vibration Isolation in MEMS. Journal of Microelectromechanical Systems, 2020, 29, 1401-1410.	1.7	17
18	Numerical Modelling of Non-Linearities in MEMS Resonators. Journal of Microelectromechanical Systems, 2020, 29, 1443-1454.	1.7	16

#	ARTICLE	IF	CITATIONS
19	Design, fabrication and experimental validation of a MEMS periodic auxetic structure. <i>Smart Materials and Structures</i> , 2019, 28, 095011.	1.8	13
20	Hardening, Softening, and Linear Behavior of Elastic Beams in MEMS: An Analytical Approach. <i>Journal of Microelectromechanical Systems</i> , 2019, 28, 189-198.	1.7	13
21	Non linear response and optimization of a new z-axis resonant micro-accelerometer. <i>Mechatronics</i> , 2016, 40, 235-243.	2.0	12
22	Nonlinear dynamics under varying temperature conditions of the resonating beams of a differential resonant accelerometer. <i>Journal of Micromechanics and Microengineering</i> , 2018, 28, 075004.	1.5	12
23	A novel low-frequency multi-bandgaps metaplate: Genetic algorithm based optimization and experimental validation. <i>Mechanical Systems and Signal Processing</i> , 2022, 181, 109495.	4.4	8
24	The First Three-Dimensional Printed and Wet-Metallized Coriolis Mass Flowmeter. , 2020, 4, 1-4.		6
25	The First Frequency-Modulated (FM) Pitch Gyroscope. <i>Proceedings (mdpi)</i> , 2017, 1, 393.	0.2	5
26	Optimal design and nonlinearities in a z-axis resonant accelerometer. , 2015, , .		4
27	Torsional Microresonator in the Nonlinear Regime: Experimental, Numerical and Analytical Characterization. <i>Procedia Engineering</i> , 2016, 168, 933-936.	1.2	4
28	Optimization of auxetic structures for MEMS applications. , 2016, , .		4
29	An Outlook on Potentialities and Limits in Using Epitaxial Polysilicon for MEMS Real-Time Clocks. <i>IEEE Transactions on Industrial Electronics</i> , 2020, 67, 6996-7004.	5.2	4
30	Experimental Evidence of Mechanical Frequency Comb in a Quad-Mass Mems Structure. , 2021, , .		4
31	A 3D Printed Ti6Al4V Alloy Uniaxial Capacitive Accelerometer. <i>IEEE Sensors Journal</i> , 2021, 21, 19640-19646.	2.4	4
32	A Metaplate in MEMS for innovative applications: vibration isolation and tunable mechanical filters. , 2020, , .		4
33	Microstructured Phononic Crystal Isolates from Ultrasonic Mechanical Vibrations. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 2499.	1.3	4
34	3D-printing and wet metallization for uniaxial and multi-axial accelerometers. , 2018, , .		3
35	Interpolation Based Reduced Order Modelling for Non-linearities in MEMS. , 2020, , .		3
36	Reduced Order Modelling in a Mems Arch Resonator Exhibiting 1:2 Internal Resonance. , 2022, , .		3

#	ARTICLE	IF	CITATIONS
37	Design, Fabrication and Testing of the First 3D-Printed and Wet Metallized z-Axis Accelerometer. Proceedings (mdpi), 2017, 1, .	0.2	2
38	A Defect-Based MEMS Phononic Crystal Slab Waveguide. , 2022, , .		2
39	Mechanics of Microsystems: A Recent Journey in a Fascinating Branch of Mechanics. , 2022, , 419-435.		2
40	Integrated structure for a resonant micro-gyroscope and accelerometer. Frattura Ed Integrita Strutturale, 2014, 8, 334-342.	0.5	1
41	High speed vision system for the dynamic characterization of 3D printed sensors. Journal of Physics: Conference Series, 2019, 1249, 012001.	0.3	1
42	Towards 3-Axis FM Mems Gyroscopes: Mechanical Design and Experimental Validation. , 2019, , .		1
43	Nonlinear dynamics of MEMS resonators: numerical modelling and experiments. , 2019, , .		1
44	Linear and Nonlinear Mechanics in MEMS. , 2022, , 389-437.		1
45	MEMS Resonators: Numerical Modeling. Lecture Notes in Mechanical Engineering, 2020, , 1159-1166.	0.3	0