Matteo Aureli

List of Publications by Year
in descending order

56	1,515	430754	315616
papers	citations	18 h-index	38 g-index

56	56	56	1034
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Free-Locomotion of Underwater Vehicles Actuated by Ionic Polymer Metal Composites. IEEE/ASME Transactions on Mechatronics, 2010, 15, 603-614.	3.7	289
2	Energy harvesting from base excitation of ionic polymer metal composites in fluid environments. Smart Materials and Structures, 2010, 19, 015003.	1.8	181
3	Nonlinear finite amplitude vibrations of sharp-edged beams in viscous fluids. Journal of Sound and Vibration, 2012, 331, 1624-1654.	2.1	111
4	Fused filament 3D printing of ionic polymer-metal composites (IPMCs). Smart Materials and Structures, 2015, 24, 125021.	1.8	109
5	On the capacitance-boost of ionic polymer metal composites due to electroless plating: Theory and experiments. Journal of Applied Physics, 2009, 105, .	1.1	77
6	A physics-based model of the electrical impedance of ionic polymer metal composites. Journal of Applied Physics, 2012, 111, .	1.1	77
7	Low frequency and large amplitude oscillations of cantilevers in viscous fluids. Applied Physics Letters, 2010, 96, .	1.5	75
8	Nonlinear sensing of ionic polymer metal composites. Continuum Mechanics and Thermodynamics, 2013, 25, 273-310.	1.4	71
9	Transverse harmonic oscillations of laminae in viscous fluids: a lattice Boltzmann study. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 2456-2466.	1.6	63
10	Finite amplitude vibrations of cantilevers of rectangular cross sections in viscous fluids. Journal of Fluids and Structures, 2013, 40, 52-69.	1.5	61
11	Effect of polydispersivity and porosity on the elastic properties of hollow particle filled composites. Mechanics of Materials, 2010, 42, 726-739.	1.7	38
12	Effect of electrode surface roughness on the electrical impedance of ionic polymerâ€“metal composites. Smart Materials and Structures, 2012, 21, 105030.	1.8	36
13	Portraits of self-organization in fish schools interacting with robots. Physica D: Nonlinear Phenomena, 2012, 241, 908-920.	1.3	36
14	Nonlinear finite amplitude torsional vibrations of cantilevers in viscous fluids. Journal of Applied Physics, 2012, 111, .	1.1	27
15	Characterization of Buoyant Fluorescent Particles for Field Observations of Water Flows. Sensors, 2010, 10, 11512-11529.	2.1	25
16	Coordination of self-propelled particles through external leadership. Europhysics Letters, 2010, 92, 40004.	0.7	24
17	Experimental study of oscillating plates in viscous fluids: Qualitative and quantitative analysis of the flow physics and hydrodynamic forces. Physics of Fluids, 2018, 30, .	1.6	23
18	Nonlinear buckling of a spherical shell embedded in an elastic medium with imperfect interface. International Journal of Solids and Structures, 2013, 50, 2310-2327.	1.3	21

#	Article	IF	Citations
19	Finite amplitude oscillations of flanged laminas in viscous flows: Vortexâ€“structure interactions for hydrodynamic damping control. Journal of Fluids and Structures, 2015, 59, 297-315.	1.5	19
20	Three-dimensional analysis of hydrodynamic forces and power dissipation in shape-morphing cantilevers oscillating in viscous fluids. International Journal of Mechanical Sciences, 2018, 149, 436-451.	3.6	17
21	Nonlinear oscillations of shape-morphing submerged structures: Control of hydrodynamic forces and power dissipation via active flexibility. Journal of Fluids and Structures, 2017, 74, 35-52.	1.5	15
22	Modulusâ€“density negative correlation for CNT-reinforced polymer nanocomposites: Modeling and experiments. Composites Part B: Engineering, 2015, 70, 175-183.	5.9	14
23	Cavitation Performance of Constant and Variable Pitch Helical Inducers for Centrifugal Pumps: Effect of Inducer Tip Clearance. Journal of Fluids Engineering, Transactions of the ASME, 2020, 142, .	0.8	13
24	Mechanics and energetics modeling of ball-milled metal foil and particle structures. Acta Materialia, 2017, 123, 305-316.	3.8	11
25	Ionic polymer metal composite compression sensors with 3D-structured interfaces. Smart Materials and Structures, 2021, 30, 125027.	1.8	9
26	Plate geometries for contact resonance atomic force microscopy: Modeling, optimization, and verification. Journal of Applied Physics, 2018, 124, .	1.1	7
27	Finite amplitude torsional oscillations of shape-morphing plates immersed in viscous fluids. Physics of Fluids, 2020, 32, .	1.6	7
28	A framework for iterative analysis of non-classically damped dynamical systems. Journal of Sound and Vibration, 2014, 333, 6688-6705.	2.1	6
29	Non-equilibrium microscale thermomechanical modeling of bimetallic particulate fractal structures during ball milling fabrication. Journal of Applied Physics, 2017, 122, 025118.	1.1	6
30	Small amplitude oscillations of a shape-morphing plate immersed in a viscous fluid near a solid wall. Journal of Applied Physics, 2018, 124, .	1.1	6
31	Control-oriented modeling of Ionic Polymer Metal Composites for biomimetic underwater propulsion. , 2010, , .		5
32	Contact Resonance Atomic Force Microscopy Using Long, Massive Tips. Sensors, 2019, 19, 4990.	2.1	5
33	Fused Filament Additive Manufacturing of Ionic Polymer-Metal Composite Soft Active 3D Structures. , 2015, , .		4
34	Bimetallic diffusion modeling and temperature regulation during ballÂmilling. Materials and Design, 2018, 155, 233-243.	3.3	4
35	Interactions Between Fish and Robots: An Experimental Study. , 2010, , .		3
36	Thermostructural observation and adaptive control of fractal structure in ball-milled materials. Materials and Design, 2018, 160, 772-782.	3.3	3

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37	Sensor Egregiumâ€"An Atomic Force Microscope Sensor for Continuously Variable Resonance Amplification. Journal of Vibration and Acoustics, Transactions of the ASME, 2021, 143, .	1.0	3
38	Comparison of Transport Equation-Based Cavitation Models and Application To Industrial Pumps With Inducers. Journal of Fluids Engineering, Transactions of the ASME, 2022, 144, .	0.8	3
39	On a Physics-Based Model of the Electrical Impedance of Ionic Polymer Metal Composites. , 2012, , .		2
40	Multivariable control of ball-milled reactive material composition and structure. Journal of Manufacturing Processes, 2020, 53, 238-249.	2.8	2
41	Exterior Dissipation, Proportional Decay, and Integrals of Motion. Physical Review Letters, 2021, 127, 134101.	2.9	2
42	Minimization of Hydrodynamic Power Losses in Oscillating Submerged Structures by a Novel Shape-Morphing Strategy. , 2016, , .		1
43	Three-Dimensional Analysis of Shape-Morphing Cantilever Oscillations in Viscous Fluids. , 2017, , .		1
44	A Plate-Like Sensor for the Identification of Sample Viscoelastic Properties Using Contact Resonance Atomic Force Microscopy. ASME Letters in Dynamic Systems and Control, 2021, 1, .	0.4	1
45	Buoyant Fluorescent Particles as a Novel Sensing Technology for Field Observations of Water Flows. , 2011, , .		1
46	On a Physics-Based Model for Nonlinear Sensing in Ionic Polymer Metal Composites. , 2012, , .		1
47	Capacitance boost in ionic polymer metal composites due to electrode surface roughness. , 2009, , .		0
48	Free-Locomotion of a Fish-Like Robotic Swimmer Propelled by a Vibrating Ionic Polymer Metal Composite. , 2009, , .		0
49	A Model of Self-Propelled Particles Coordinating Under External Leadership. , 2011, , .		0
50	Finite Amplitude Underwater Torsional Vibrations of Cantilevers. , 2012, , .		0
51	Finite Amplitude Underwater Flexural Vibrations of Cantilevers. , 2012, , .		0
52	Modulation of Nonlinear Hydrodynamic Damping in Finite Amplitude Underwater Oscillations of Flanged Structures. , 2015, , .		0
53	Qualitative and Quantitative Study of the Flow Physics in the Vicinity of an Oscillating Plate in Viscous Fluids. , 2017, , .		0
54	Torsional Oscillations of a Shape-Morphing Plate in Viscous Fluids. , 2019, , .		0

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55	A Novel Plate-Like Sensor Utilizing Curvature-Based Stiffening for Nanometrology Applications. , 2020, , .		0
56	Ionic Polymer Metal Composite Sensors With Engineered Interfaces (eIPMCs): Compression Sensing Modeling and Experiments. , 2020, , .		0