Paolo Bisegna

List of Publications by Year
in descending order

143	2,591	186265	276875
papers	citations	28 h-index	41 g-index

152	152	152	1300
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Single-cell microfluidic impedance cytometry: from raw signals to cell phenotypes using data analytics. Lab on A Chip, 2021, 21, 22-54.	6.0	109
2	An Exact Three-Dimensional Solution for Simply Supported Rectangular Piezoelectric Plates. Journal of Applied Mechanics, Transactions ASME, 1996, 63, 628-638.	2.2	97
3	Variational bounds for the overall properties of piezoelectric composites. Journal of the Mechanics and Physics of Solids, 1996, 44, 583-602.	4.8	73
4	An impedance-based flow microcytometer for single cell morphology discrimination. Lab on A Chip, 2014, 14, 2548.	6.0	68
5	High accuracy particle analysis using sheathless microfluidic impedance cytometry. Lab on A Chip, 2016, 16, 2467-2473.	6.0	67
6	Coplanar electrode microfluidic chip enabling accurate sheathless impedance cytometry. Lab on A Chip, 2017, 17, 1158-1166.	6.0	65
7	The unilateral frictionless contact of a piezoelectric body with a rigid support. Mathematical and Computer Modelling, 1998, 28, 19-28.	2.0	64
8	A neural network approach for real-time particle/cell characterization in microfluidic impedance cytometry. Analytical and Bioanalytical Chemistry, 2020, 412, 3835-3845.	3.7	62
9	Frequency split and vibration localization in imperfect rings. Journal of Sound and Vibration, 2007, 306, 691-711.	3.9	59
10	High-throughput label-free characterization of viable, necrotic and apoptotic human lymphoma cells in a coplanar-electrode microfluidic impedance chip. Biosensors and Bioelectronics, 2020, 150, 111887.	10.1	51
11	Mitigating positional dependence in coplanar electrode Coulter-type microfluidic devices. Sensors and Actuators B: Chemical, 2017, 247, 580-586.	7.8	50
12	A novel wiring scheme for standard chips enabling high-accuracy impedance cytometry. Sensors and Actuators B: Chemical, 2018, 256, 580-589.	7.8	48
13	Diffusion of the Second Messengers in the Cytoplasm Acts as a Variability Suppressor of the Single Photon Response in Vertebrate Phototransduction. Biophysical Journal, 2008, 94, 3363-3383.	0.5	47
14	On methods for bounding the overall properties of periodic piezoelectric fibrous composites. Journal of the Mechanics and Physics of Solids, 1997, 45, 1329-1356.	4.8	43
15	Closed-form formulas for the optimal pole-based design of tuned mass dampers. Journal of Sound and Vibration, 2012, 331, 2291-2314.	3.9	43
16	EVOLUTION AND MEMORY EFFECTS IN THE HOMOGENIZATION LIMIT FOR ELECTRICAL CONDUCTION IN BIOLOGICAL TISSUES. Mathematical Models and Methods in Applied Sciences, 2004, 14, 1261-1295.	3.3	39
17	Optimized electric networks for vibration damping of piezoactuated beams. Journal of Sound and Vibration, 2006, 289, 908-937.	3.9	39
18	Bounds on the overall properties of composites with debonded frictionless interfaces. Mechanics of Materials, 1998, 28, 23-32.	3.2	38

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19	Evaluation of higher-order theories of piezoelectric plates in bending and in stretching. International Journal of Solids and Structures, 2001, 38, 8805-8830.	2.7	37
20	Mathematical Model of the Spatio-Temporal Dynamics of Second Messengers in Visual Transduction. Biophysical Journal, 2003, 85, 1358-1376.	0.5	36
21	On a hierarchy of models for electrical conduction in biological tissues. Mathematical Methods in the Applied Sciences, 2006, 29, 767-787.	2.3	36
22	A Consistent Theory of Thin Piezoelectric Plates. Journal of Intelligent Material Systems and Structures, 1996, 7, 372-389.	2.5	34
23	EIT-Inspired Microfluidic Cytometer for Single-Cell Dielectric Spectroscopy. Journal of Microelectromechanical Systems, 2010, 19, 1029-1040.	2.5	33
24	Deciphering impedance cytometry signals with neural networks. Lab on A Chip, 2022, 22, 1714-1722.	6.0	32
25	Identification of key factors that reduce the variability of the single photon response. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 7804-7807.	7.1	31
26	High-throughput electrical position detection of single flowing particles/cells with non-spherical shape. Lab on A Chip, 2019, 19, 1818-1827.	6.0	31
27	Thrust line analysis revisited and applied to optimization of masonry arches. International Journal of Mechanical Sciences, 2020, 179, 105690.	6.7	29
28	Modeling the Role of Incisures in Vertebrate Phototransduction. Biophysical Journal, 2006, 91, 1192-1212.	0.5	28
29	A Simple and Robust Event-Detection Algorithm for Single-Cell Impedance Cytometry. IEEE Transactions on Biomedical Engineering, 2016, 63, 415-422.	4.2	27
30	Dynamics of mouse rod phototransduction and its sensitivity to variation of key parameters. IET Systems Biology, 2010, 4, 12-32.	1.5	26
31	Mindlin-Type Finite Elements for Piezoelectric Sandwich Plates. Journal of Intelligent Material Systems and Structures, 2000, 11, 14-25.	2.5	24
32	Polar decomposition based corotational framework for triangular shell elements with distributed loads. International Journal for Numerical Methods in Engineering, 2013, 95, 499-528.	2.8	24
33	Kinetics of Rhodopsin Deactivation and Its Role in Regulating Recovery and Reproducibility of Rod Photoresponse. PLoS Computational Biology, 2010, 6, e1001031.	3.2	23
34	Advanced composites based on relaxor-ferroelectric single crystals: from electromechanical coupling to energy-harvesting applications. CrystEngComm, 2016, 18, 5986-6001.	2.6	23
35	A unifying computational approach for the lower-bound limit analysis of systems of masonry arches and buttresses. Engineering Structures, 2020, 221, 110999.	5.3	23
36	Finite element approximation of piezoelectric plates. International Journal for Numerical Methods in Engineering, 2001, 50, 1469-1499.	2.8	22

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37	Orientation Effects in 1â€“3 Composites Based on 0.93Pb(Zn_{1/3}Nb_{2/3})O₃â€“ 0.07PbTiO₃Single Crystals. Ferroelectrics, 2008, 376, 140-152.	0.6	22
38	Analysis of the Piezoelectric Performance of Modern 0â€“3-Type Composites Based on Relaxor-Ferroelectric Single Crystals. Ferroelectrics, 2011, 413, 176-191.	0.6	22
39	Electrical measurement of cross-sectional position of particles flowing through a microchannel. Microfluidics and Nanofluidics, 2018, 22, 1.	2.2	22
40	A mixed finite element for the nonlinear analysis of inâ€plane loaded masonry walls. International Journal for Numerical Methods in Engineering, 2019, 120, 1227-1248.	2.8	22
41	A potential theory for monotone multivalued operators. Quarterly of Applied Mathematics, 1993, 51, 613-631.	0.7	21
42	The Saint-Venant Problem for Monoclinic Piezoelectric Cylinders. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 1998, 78, 147-165.	1.6	21
43	A layer-wise Reissnerâ€“Mindlin-type model for the vibration analysis and suppression of piezoactuated plates. Computers and Structures, 2001, 79, 2309-2319.	4.4	21
44	A Rational Deduction of Plate Theories from the Three-Dimensional Linear Elasticity. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 1997, 77, 349-366.	1.6	20
45	Modeling, Simulation, and Performance Evaluation of a Novel Microfluidic Impedance Cytometer for Morphology-Based Cell Discrimination. Journal of Microelectromechanical Systems, 2014, 23, 785-794.	2.5	20
46	A variational-based fixed-point algorithm for the limit analysis of dry-masonry block structures with non-associative Coulomb friction. International Journal of Mechanical Sciences, 2019, 161-162, 105078.	6.7	20
47	A Bayesian Approach for Coincidence Resolution in Microfluidic Impedance Cytometry. IEEE Transactions on Biomedical Engineering, 2021, 68, 340-349.	4.2	20
48	A finite difference method for the static limit analysis of masonry domes under seismic loads. Meccanica, 2022, 57, 121-141.	2.0	20
49	Estimation of the time since death: Sudden increase of ambient temperature. Forensic Science International, 2008, 176, 196-199.	2.2	19
50	Piezo-Active Composites. Springer Series in Materials Science, 2018, , .	0.6	19
51	A new computational framework for the minimum thrust analysis of axisymmetric masonry domes. Engineering Structures, 2021, 234, 111962.	5.3	19
52	A novel high-performance mixed membrane finite element for the analysis of inelastic structures. Computers and Structures, 2017, 182, 337-353.	4.4	18
53	Simulation and performance analysis of a novel high-accuracy sheathless microfluidic impedance cytometer with coplanar electrode layout. Medical Engineering and Physics, 2017, 48, 81-89.	1.7	18
54	Electro-Optical Classification of Pollen Grains via Microfluidics and Machine Learning. IEEE Transactions on Biomedical Engineering, 2022, 69, 921-931.	4.2	18

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55	Homogenization and concentrated capacity for the heat equation with non-linear variational data in reticular almost disconnected structures and applications to visual transduction. Annali Di Matematica Pura Ed Applicata, 2003, 182, 375-407.	1.0	17
56	A new SMA shell element based on the corotational formulation. Computational Mechanics, 2014, 54, 1315-1329.	4.0	17
57	A Layer-Wise Laminate Theory Rationally Deduced From the Three-Dimenstonal Elasticity. Journal of Applied Mechanics, Transactions ASME, 1997, 64, 538-545.	2.2	16
58	A simple formula for the effective complex conductivity of periodic fibrous composites with interfacial impedance and applications to biological tissues. Journal Physics D: Applied Physics, 2008, 41, 115506.	2.8	16
59	Anisotropic piezoelectric properties of 1â€“3 ceramic / polymer composites comprising rods with elliptic cross section. Journal of Electroceramics, 2010, 25, 26-37.	2.0	16
60	Effective longitudinal shear moduli of periodic fibre-reinforced composites with radially-graded fibres. International Journal of Solids and Structures, 2010, 47, 383-397.	2.7	16
61	New aspect-ratio effect in three-component composites for piezoelectric sensor, hydrophone and energy-harvesting applications. Sensors and Actuators A: Physical, 2015, 229, 94-103.	4.1	16
62	A mixed tetrahedral element with nodal rotations for large-displacement analysis of inelastic structures. International Journal for Numerical Methods in Engineering, 2016, 108, 722-749.	2.8	16
63	New orientation effect in piezo-active 1â€“3-type composites. Materials Chemistry and Physics, 2015, 151, 187-195.	4.0	15
64	Homogenization limit for electrical conduction in biological tissues in the radio-frequency range. Comptes Rendus - Mecanique, 2003, 331, 503-508.	2.1	14
65	Existence and uniqueness for an elliptic problem with evolution arising in electrodynamics. Nonlinear Analysis: Real World Applications, 2005, 6, 367-380.	1.7	14
66	State update algorithm for isotropic elastoplasticity by incremental energy minimization. International Journal for Numerical Methods in Engineering, 2016, 105, 163-196.	2.8	14
67	Minimum thrust and minimum thickness of spherical masonry domes: A semi-analytical approach. European Journal of Mechanics, A/Solids, 2021, 87, 104222.	3.7	14
68	Homogenization limit and asymptotic decay for electrical conduction in biological tissues in the high radiofrequency range. Communications on Pure and Applied Analysis, 2010, 9, 1131-1160.	0.8	14
69	An incremental energy minimization state update algorithm for 3D phenomenological internalâ€variable SMA constitutive models based on isotropic flow potentials. International Journal for Numerical Methods in Engineering, 2016, 105, 197-220.	2.8	13
70	Blow-up of solutions of a nonlinear parabolic equation in damage mechanics. European Journal of Applied Mathematics, 1997, 8, 89-123.	2.9	12
71	D-PANA: a convergent block-relaxation solution method for the discretized dual formulation of the Signoriniâ€“Coulomb contact problemâ€. Comptes Rendus Mathematique, 2001, 333, 1053-1058.	0.5	12
72	Exponential asymptotic stability for an elliptic equation with memory arising in electrical conduction in biological tissues. European Journal of Applied Mathematics, 2009, 20, 431-459.	2.9	12

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73	Mechanical modeling of bend sensors exploited to measure human joint movements. , 2009, , .		12
74	Numerical Investigation of a Novel Wiring Scheme Enabling Simple and Accurate Impedance Cytometry. Micromachines, 2017, 8, 283.	2.9	12
75	Features of electromechanical properties of 1â€“3 composites based on PbTiO3-type ceramics. Journal Physics D: Applied Physics, 2008, 41, 035406.	2.8	11
76	Stability and memory effects in a homogenized model governing the electrical conduction in biological tissues. Journal of Mechanics of Materials and Structures, 2009, 4, 211-223.	0.6	11
77	Dynamical behavior of disordered rotationally periodic structures: A homogenization approach. Journal of Sound and Vibration, 2011, 330, 2608-2627.	3.9	11
78	A corotational flat triangular element for large strain analysis of thin shells with application to soft biological tissues. Computational Mechanics, 2014, 54, 847-864.	4.0	11
79	Collapse capacity of masonry domes under horizontal loads: A static limit analysis approach. International Journal of Mechanical Sciences, 2021, 212, 106827.	6.7	11
80	An elliptic equation with history. Comptes Rendus Mathematique, 2004, 338, 595-598.	0.3	10
81	Effective longitudinal shear moduli of periodic fibre-reinforced composites with functionally-graded fibre coatings. International Journal of Solids and Structures, 2013, 50, 1154-1163.	2.7	10
82	Features of the Piezoelectric Effect in a Novel PZT-Type Ceramic/Clay Composite. Ferroelectrics, Letters Section, 2014, 41, 82-88.	1.0	10
83	Coupled optimization of tuned-mass energy harvesters accounting for host structure dynamics. Journal of Intelligent Material Systems and Structures, 2014, 25, 1553-1565.	2.5	10
84	A simple electrical approach to monitor dielectrophoretic focusing of particles flowing in a microchannel. Electrophoresis, 2019, 40, 1400-1407.	2.4	10
85	Square Cross Vaults on Spreading Supports. RILEM Bookseries, 2019, , 1045-1053.	0.4	10
86	Electromechanical coupling and its anisotropy in a novel 1â€“3â€“0 composite based on single-domain 0.58Pb(Mg1/3Nb2/3)O3â€“0.42PbTiO3 crystal. Composites Science and Technology, 2011, 71, 1082-1088.	7.8	9
87	Effect of the matrix subsystem on hydrostatic parameters of a novel 1â€“3-type piezo-composite. Functional Materials Letters, 2015, 08, 1550049.	1.2	9
88	Effective computational modeling of erythrocyte electro-deformation. Meccanica, 2017, 52, 613-631.	2.0	8
89	A corotational triangular facet shell element for geometrically nonlinear analysis of thin piezoactuated structures. Composite Structures, 2017, 172, 267-281.	5.8	8
90	An isogeometric analysis formulation for red blood cell electro-deformation modeling. Computer Methods in Applied Mechanics and Engineering, 2018, 338, 392-411.	6.6	8

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91	Novel lead-free composites with two porosity levels: large piezoelectric anisotropy and high sensitivity. Journal Physics D: Applied Physics, 2020, 53, 395303.	2.8	8
92	<title>Semi-active control of a thin piezoactuated structure</title>. , 2000, , .		7
93	Relaxation procedures for solving Signoriniâ€“Coulomb contact problems. Advances in Engineering Software, 2004, 35, 595-600.	3.8	7
94	Homogenization and concentration of capacity in the rod outer segment with incisures. Applicable Analysis, 2006, 85, 303-331.	1.3	7
95	Optimization of a passive vibration control scheme acting on a bladed rotor using an homogenized model. Structural and Multidisciplinary Optimization, 2009, 39, 625-636.	3.5	7
96	State update algorithm for associative elastic-plastic pressure-insensitive materials by incremental energy minimization. Frattura Ed Integrita Strutturale, 2014, 8, 111-127.	0.9	7
97	Homogenization and concentrated capacity in reticular almost disconnected structures. Comptes Rendus Mathematique, 2002, 335, 329-332.	0.3	6
98	Biomechanics in â€œSino-Italian Jointâ€• Acta Mechanica Sinica/Lixue Xuebao, 2021, 37, 169-172.	3.4	6
99	The compressive response of additively-manufactured hollow truss lattices: an experimental investigation. International Journal of Advanced Manufacturing Technology, 2022, 120, 3529-3541.	3.0	6
100	The Saint-Venant problem for general anisotropic piezoelectric cylinders with applications to smart metamaterials design. Applied Mathematical Modelling, 2021, 93, 831-851.	4.2	5
101	Frictional Behaviour of Masonry Interfaces: Experimental Investigation on Two Dry-Jointed Tuff Blocks. Lecture Notes in Mechanical Engineering, 2020, , 2032-2047.	0.4	5
102	Fabrication and experimental characterisation of a bistable tensegrity-like unit for lattice metamaterials. Additive Manufacturing, 2022, 57, 102946.	3.0	5
103	Mohr's arbelos. Meccanica, 1995, 30, 417-424.	2.0	4
104	Bounds on the off-diagonal coefficients of the homogenized constitutive tensor of a composite material. Mechanics Research Communications, 1996, 23, 239-245.	1.8	4
105	On the Choice of the Shunt Circuit for Single-mode Vibration Damping of Piezoactuated Structures. , 2005, , 389-400.		4
106	Electromechanical Coupling Factors of Novel 0â€“3â€“0 Composites Based on PMNâ€“xPT Single Crystals. Ferroelectrics, 2011, 422, 40-43.	0.6	4
107	A Continuous Model for the Dynamical Analysis of Mistuned Bladed Rotors. International Journal of Rotating Machinery, 2012, 2012, 1-10.	0.8	4
108	<title>On the use of negative capacitances for vibration damping of piezoactuated structures</title>. , 2005, , .		3

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109	Interrelations Between Microstructure and Piezoelectric Sensitivity in Novel 0â€“3â€“0 Composites Based on 0.67Pb(Mg_{1/3}Nb_{2/3})O₃â€“ 0.33PbTiO₃Single Crystal. Ferroelectrics, 2011, 413, 11-28.	0.6	3
110	Squared figures of merit and electromechanical coupling factors of a novel lead-free 1â€“3â€“0 composite for sensor and energy-harvesting applications. Sensors and Actuators A: Physical, 2021, 318, 112473.	4.1	3
111	Refined Models for Vibration Analysis and Control of Thick Piezoelectric Laminates. , 0, , .		3
112	On the Fiber-Governed Bimodular Constitutive Models. , 1995, , 113-128.		3
113	Some Mathematical Problems in Visual Transduction. Progress in Nonlinear Differential Equations and Their Application, 2005, , 65-80.	0.9	2
114	Anisotropy Factors and Hydrostatic Parameters of 1â€“3-Type Piezo-Active Composites with Auxetic Polymer Matrices. Ferroelectrics, 2012, 432, 92-102.	0.6	2
115	Mixed Tetrahedral Elements for the Analysis of Structures with Material and Geometric Nonlinearities. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 219-220.	0.2	2
116	MODELING AND DESIGN OF PERIODIC LATTICES WITH TENSEGRITY ARCHITECTURE AND HIGHLY NONLINEAR RESPONSE. , 2021, , .		2
117	Limit Analysis of Dry Masonry Block Structures with Non-associative Coulomb Friction: A Novel Computational Approach. Lecture Notes in Applied and Computational Mechanics, 2021, , 83-96.	2.2	2
118	New Effects in 1â€“3-Type Composites Based on Relaxor-Ferroelectrics Single Crystals. Springer Proceedings in Physics, 2016, , 179-195.	0.2	2
119	Mindlin-Type Finite Elements for Piezoelectric Sandwich Plates. Journal of Intelligent Material Systems and Structures, 2000, 11, 14-25.	2.5	2
120	Corotational flat triangular elements for the nonlinear analysis of thin shell structures. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 177-178.	0.2	1
121	Special issue on Advances in biomechanics: from foundations to applications. Meccanica, 2017, 52, 487-488.	2.0	1
122	Length measurement and spatial orientation reconstruction of single nanowires. Nanotechnology, 2018, 29, 375704.	2.6	1
123	Limit analysis of dry masonry block assemblages with non-associative frictional joints. AIP Conference Proceedings, 2020, , .	0.4	1
124	A Mixed Membrane Finite Element for Masonry Structures. Lecture Notes in Mechanical Engineering, 2020, , 1167-1178.	0.4	1
125	Orientation Effects and Anisotropy of Properties in 2â€“2 and Related Composites. Springer Series in Materials Science, 2014, , 43-88.	0.6	1
126	Hill's type a-priori relations among the elastic constants of a fiber-reinforced composite material. Mechanics Research Communications, 1993, 20, 447-457.	1.8	0

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127	Consistent Hashin-Shtrikman Bounds on the Effective Properties of Periodic Composite Materials. Journal of Applied Mechanics, Transactions ASME, 1999, 66, 858-866.	2.2	0
128	Delamination of active layers in piezoelectric laminates. Solid Mechanics and Its Applications, 1999, , 137-150.	0.2	0
129	Analysis of the vibration localization phenomenon in rotationally periodic structures using a homogenized model. , 2007, , .		0
130	Applications of homogenization techniques to the electrical conduction in biological tissues. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 2010013-2010014.	0.2	0
131	Forced Damping Vibration of a Cantilever Beam. , 2008, , .		0
132	Mathematical aspects of Variability and Variability Suppression of the Single Photon Response in Vertebrate Phototransduction. Biophysical Journal, 2009, 96, 200a.	0.5	0
133	The Piezoelectric Medium and Its Electromechanical Properties. Springer Series in Materials Science, 2014, , 1-23.	0.6	0
134	Polarization Fields in the Variational Analysis of the Linear Plezoelectric Problem. Nonconvex Optimization and Its Applications, 2001, , 161-175.	0.1	0
135	Orientation Effects in Single-Domain Single Crystals. Springer Series in Materials Science, 2014, , 25-42.	0.6	0
136	Orientation Effects and Anisotropy of Properties in 0â€“3 Composites. Springer Series in Materials Science, 2014, , 127-153.	0.6	0
137	Improving Piezoelectric Sensitivity. Springer Series in Materials Science, 2018, , 163-169.	0.6	0
138	Microgeometry of Composites and Their Piezoelectric Coefficients $$varvec{g_{ij}^{*} }$$. Springer Series in Materials Science, 2018, , 99-133.	0.6	0
139	Piezoelectric Coefficients $$varvec{h}_{varvec{ij}}^{varvec{*}}$$: New Opportunities to Improve Sensitivity. Springer Series in Materials Science, 2018, , 153-161.	0.6	0
140	Effective Piezoelectric Coefficients $$d_{ij}^{*}$$: From Microgeometry to Anisotropy. Springer Series in Materials Science, 2018, , 35-97.	0.6	0
141	The Piezoelectric Medium and Piezoelectric Sensitivity. Springer Series in Materials Science, 2018, , 1-34.	0.6	0
142	Piezoelectric Coefficients $$user2{e}_{user2{ij}}^{*}$$ and $$user2{d}_{user2{ij}}^{*}$$: Combination of Properties at Specific Microgeometry. Springer Series in Materials Science, 2018, , 135-152.	0.6	0
143	Relaxation and Block-Relaxation Procedures for the Dual Formulation of the Signorini-Coulomb Frictional Contact. , 0, , .		0