Paolo Bisegna

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Electro-Optical Classification of Pollen Grains via Microfluidics and Machine Learning. IEEE Transactions on Biomedical Engineering, 2022, 69, 921-931.	4.2	18
2	A finite difference method for the static limit analysis of masonry domes under seismic loads. Meccanica, 2022, 57, 121-141.	2.0	20
3	Deciphering impedance cytometry signals with neural networks. Lab on A Chip, 2022, 22, 1714-1722.	6.0	32
4	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
5	Fabrication and experimental characterisation of a bistable tensegrity-like unit for lattice metamaterials. Additive Manufacturing, 2022, 57, 102946.	3.0	5
6	A Bayesian Approach for Coincidence Resolution in Microfluidic Impedance Cytometry. IEEE Transactions on Biomedical Engineering, 2021, 68, 340-349.	4.2	20
7	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
8	MODELING AND DESIGN OF PERIODIC LATTICES WITH TENSEGRITY ARCHITECTURE AND HIGHLY NONLINEAR RESPONSE. , 2021, , .		2
9	Biomechanics in "Sino-Italian Joint― Acta Mechanica Sinica/Lixue Xuebao, 2021, 37, 169-172.	3.4	6
10	Squared figures of merit and electromechanical coupling factors of a novel lead-free 1–3–0 composite for sensor and energy-harvesting applications. Sensors and Actuators A: Physical, 2021, 318, 112473.	4.1	3
11	A new computational framework for the minimum thrust analysis of axisymmetric masonry domes. Engineering Structures, 2021, 234, 111962.	5.3	19
12	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
13	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
14	Collapse capacity of masonry domes under horizontal loads: A static limit analysis approach. International Journal of Mechanical Sciences, 2021, 212, 106827.	6.7	11
15	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
16	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
17	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
18	Limit analysis of dry masonry block assemblages with non-associative frictional joints. AIP Conference Proceedings, 2020, , .	0.4	1

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19	Thrust line analysis revisited and applied to optimization of masonry arches. International Journal of Mechanical Sciences, 2020, 179, 105690.	6.7	29
20	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
21	Frictional Behaviour of Masonry Interfaces: Experimental Investigation on Two Dry-Jointed Tuff Blocks. Lecture Notes in Mechanical Engineering, 2020, , 2032-2047.	0.4	5
22	A Mixed Membrane Finite Element for Masonry Structures. Lecture Notes in Mechanical Engineering, 2020, , 1167-1178.	0.4	1
23	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
24	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
25	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
26	A simple electrical approach to monitor dielectrophoretic focusing of particles flowing in a microchannel. Electrophoresis, 2019, 40, 1400-1407.	2.4	10
27	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
28	Square Cross Vaults on Spreading Supports. RILEM Bookseries, 2019, , 1045-1053.	0.4	10
29	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
30	Electrical measurement of cross-sectional position of particles flowing through a microchannel. Microfluidics and Nanofluidics, 2018, 22, 1.	2.2	22
31	A novel wiring scheme for standard chips enabling high-accuracy impedance cytometry. Sensors and Actuators B: Chemical, 2018, 256, 580-589.	7.8	48
32	Length measurement and spatial orientation reconstruction of single nanowires. Nanotechnology, 2018, 29, 375704.	2.6	1
33	Piezo-Active Composites. Springer Series in Materials Science, 2018, , .	0.6	19
34	Improving Piezoelectric Sensitivity. Springer Series in Materials Science, 2018, , 163-169.	0.6	0
35	Microgeometry of Composites and Their Piezoelectric Coefficients \$\$varvec{g_{ij}^{*} }\$. Springer Series in Materials Science, 2018, , 99-133.	0.6	0
36	Piezoelectric Coefficients \$\$varvec{h}_{varvec{ij}}^{varvec{*}}\$: New Opportunities to Improve Sensitivity. Springer Series in Materials Science, 2018, , 153-161.	0.6	0

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37	Effective Piezoelectric Coefficients \$\$d_{ij}^{*}\$: From Microgeometry to Anisotropy. Springer Series in Materials Science, 2018, , 35-97.	0.6	0
38	The Piezoelectric Medium and Piezoelectric Sensitivity. Springer Series in Materials Science, 2018, , 1-34.	0.6	0
39	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
40	Effective computational modeling of erythrocyte electro-deformation. Meccanica, 2017, 52, 613-631.	2.0	8
41	A novel high-performance mixed membrane finite element for the analysis of inelastic structures. Computers and Structures, 2017, 182, 337-353.	4.4	18
42	Coplanar electrode microfluidic chip enabling accurate sheathless impedance cytometry. Lab on A Chip, 2017, 17, 1158-1166.	6.0	65
43	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
44	Special issue on Advances in biomechanics: from foundations to applications. Meccanica, 2017, 52, 487-488.	2.0	1
45	Mitigating positional dependence in coplanar electrode Coulter-type microfluidic devices. Sensors and Actuators B: Chemical, 2017, 247, 580-586.	7.8	50
46	A corotational triangular facet shell element for geometrically nonlinear analysis of thin piezoactuated structures. Composite Structures, 2017, 172, 267-281.	5.8	8
47	Numerical Investigation of a Novel Wiring Scheme Enabling Simple and Accurate Impedance Cytometry. Micromachines, 2017, 8, 283.	2.9	12
48	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
49	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
50	Advanced composites based on relaxor-ferroelectric single crystals: from electromechanical coupling to energy-harvesting applications. CrystEngComm, 2016, 18, 5986-6001.	2.6	23
51	State update algorithm for isotropic elastoplasticity by incremental energy minimization. International Journal for Numerical Methods in Engineering, 2016, 105, 163-196.	2.8	14
52	High accuracy particle analysis using sheathless microfluidic impedance cytometry. Lab on A Chip, 2016, 16, 2467-2473.	6.0	67
53	A Simple and Robust Event-Detection Algorithm for Single-Cell Impedance Cytometry. IEEE Transactions on Biomedical Engineering, 2016, 63, 415-422.	4.2	27
54	New Effects in 1–3-Type Composites Based on Relaxor-Ferroelectrics Single Crystals. Springer Proceedings in Physics, 2016, , 179-195.	0.2	2

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55	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
56	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
57	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
58	Effect of the matrix subsystem on hydrostatic parameters of a novel 1–3-type piezo-composite. Functional Materials Letters, 2015, 08, 1550049.	1.2	9
59	New orientation effect in piezo-active 1–3-type composites. Materials Chemistry and Physics, 2015, 151, 187-195.	4.0	15
60	Features of the Piezoelectric Effect in a Novel PZT-Type Ceramic/Clay Composite. Ferroelectrics, Letters Section, 2014, 41, 82-88.	1.0	10
61	The Piezoelectric Medium and Its Electromechanical Properties. Springer Series in Materials Science, 2014, , 1-23.	0.6	0
62	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
63	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
64	A new SMA shell element based on the corotational formulation. Computational Mechanics, 2014, 54, 1315-1329.	4.0	17
65	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
66	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
67	An impedance-based flow microcytometer for single cell morphology discrimination. Lab on A Chip, 2014, 14, 2548.	6.0	68
68	Orientation Effects and Anisotropy of Properties in 2–2 and Related Composites. Springer Series in Materials Science, 2014, , 43-88.	0.6	1
69	Orientation Effects in Single-Domain Single Crystals. Springer Series in Materials Science, 2014, , 25-42.	0.6	0
70	Orientation Effects and Anisotropy of Properties in 0–3 Composites. Springer Series in Materials Science, 2014, , 127-153.	0.6	0
71	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
72	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

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73	A Continuous Model for the Dynamical Analysis of Mistuned Bladed Rotors. International Journal of Rotating Machinery, 2012, 2012, 1-10.	0.8	4
74	Anisotropy Factors and Hydrostatic Parameters of 1–3-Type Piezo-Active Composites with Auxetic Polymer Matrices. Ferroelectrics, 2012, 432, 92-102.	0.6	2
75	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
76	Electromechanical Coupling Factors of Novel 0–3–0 Composites Based on PMN–xPT Single Crystals. Ferroelectrics, 2011, 422, 40-43.	0.6	4
77	Electromechanical coupling and its anisotropy in a novel 1–3–0 composite based on single-domain 0.58Pb(Mg1/3Nb2/3)O3–0.42PbTiO3 crystal. Composites Science and Technology, 2011, 71, 1082-1088.	7.8	9
78	Dynamical behavior of disordered rotationally periodic structures: A homogenization approach. Journal of Sound and Vibration, 2011, 330, 2608-2627.	3.9	11
79	Interrelations Between Microstructure and Piezoelectric Sensitivity in Novel 0–3–0 Composites Based on 0.67Pb(Mg _{1/3} Nb _{2/3})O ₃ â° 0.33PbTiO ₃ Single Crystal. Ferroelectrics, 2011, 413, 11-28.	0.6	3
80	Identification of key factors that reduce the variability of the single photon response. Proceedings of the United States of America, 2011, 108, 7804-7807.	7.1	31
81	Analysis of the Piezoelectric Performance of Modern 0–3-Type Composites Based on Relaxor-Ferroelectric Single Crystals. Ferroelectrics, 2011, 413, 176-191.	0.6	22
82	Anisotropic piezoelectric properties of $1\hat{a}\in$ "3 ceramic / polymer composites comprising rods with elliptic cross section. Journal of Electroceramics, 2010, 25, 26-37.	2.0	16
83	Dynamics of mouse rod phototransduction and its sensitivity to variation of key parameters. IET Systems Biology, 2010, 4, 12-32.	1.5	26
84	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
85	Kinetics of Rhodopsin Deactivation and Its Role in Regulating Recovery and Reproducibility of Rod Photoresponse. PLoS Computational Biology, 2010, 6, e1001031.	3.2	23
86	EIT-Inspired Microfluidic Cytometer for Single-Cell Dielectric Spectroscopy. Journal of Microelectromechanical Systems, 2010, 19, 1029-1040.	2.5	33
87	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
88	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
89	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
90	Mathematical aspects of Variability and Variability Suppression of the Single Photon Response in Vertebrate Phototransduction. Biophysical Journal, 2009, 96, 200a.	0.5	0

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91	Mechanical modeling of bend sensors exploited to measure human joint movements. , 2009, , .		12
92	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
93	Estimation of the time since death: Sudden increase of ambient temperature. Forensic Science International, 2008, 176, 196-199.	2.2	19
94	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
95	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
96	Features of electromechanical properties of 1–3 composites based on PbTiO3-type ceramics. Journal Physics D: Applied Physics, 2008, 41, 035406.	2.8	11
97	Orientation Effects in 1–3 Composites Based on 0.93Pb(Zn _{1/3} Nb _{2/3})O ₃ – 0.07PbTiO ₃ Single Crystals. Ferroelectrics, 2008, 376, 140-152.	0.6	22
98	Forced Damping Vibration of a Cantilever Beam. , 2008, , .		0
99	Analysis of the vibration localization phenomenon in rotationally periodic structures using a homogenized model. , 2007, , .		0
100	Frequency split and vibration localization in imperfect rings. Journal of Sound and Vibration, 2007, 306, 691-711.	3.9	59
101	Applications of homogenization techniques to the electrical conduction in biological tissues. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 2010013-2010014.	0.2	0
102	Homogenization and concentration of capacity in the rod outer segment with incisures. Applicable Analysis, 2006, 85, 303-331.	1.3	7
103	Modeling the Role of Incisures in Vertebrate Phototransduction. Biophysical Journal, 2006, 91, 1192-1212.	0.5	28
104	Optimized electric networks for vibration damping of piezoactuated beams. Journal of Sound and Vibration, 2006, 289, 908-937.	3.9	39
105	On a hierarchy of models for electrical conduction in biological tissues. Mathematical Methods in the Applied Sciences, 2006, 29, 767-787.	2.3	36
106	<title>On the use of negative capacitances for vibration damping of piezoactuated structures</title> . , 2005, , .		3
107	Existence and uniqueness for an elliptic problem with evolution arising in electrodynamics. Nonlinear Analysis: Real World Applications, 2005, 6, 367-380.	1.7	14
108	On the Choice of the Shunt Circuit for Single-mode Vibration Damping of Piezoactuated Structures. ,		4

108 2005, , 389-400.

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109	Some Mathematical Problems in Visual Transduction. Progress in Nonlinear Differential Equations and Their Application, 2005, , 65-80.	0.9	2
110	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
111	Relaxation procedures for solving Signorini–Coulomb contact problems. Advances in Engineering Software, 2004, 35, 595-600.	3.8	7
112	An elliptic equation with history. Comptes Rendus Mathematique, 2004, 338, 595-598.	0.3	10
113	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
114	Homogenization limit for electrical conduction in biological tissues in the radio-frequency range. Comptes Rendus - Mecanique, 2003, 331, 503-508.	2.1	14
115	Mathematical Model of the Spatio-Temporal Dynamics of Second Messengers in Visual Transduction. Biophysical Journal, 2003, 85, 1358-1376.	0.5	36
116	Homogenization and concentrated capacity in reticular almost disconnected structures. Comptes Rendus Mathematique, 2002, 335, 329-332.	0.3	6
117	D-PANA: a convergent block-relaxation solution method for the discretized dual formulation of the Signorini–Coulomb contact problemâ€. Comptes Rendus Mathematique, 2001, 333, 1053-1058.	0.5	12
118	A layer-wise Reissner–Mindlin-type model for the vibration analysis and suppression of piezoactuated plates. Computers and Structures, 2001, 79, 2309-2319.	4.4	21
119	Finite element approximation of piezoelectric plates. International Journal for Numerical Methods in Engineering, 2001, 50, 1469-1499.	2.8	22
120	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
121	Polarization Fields in the Variational Analysis of the Linear Plezoelectric Problem. Nonconvex Optimization and Its Applications, 2001, , 161-175.	0.1	0
122	<title>Semi-active control of a thin piezoactuated structure</title> ., 2000, , .		7
123	Mindlin-Type Finite Elements for Piezoelectric Sandwich Plates. Journal of Intelligent Material Systems and Structures, 2000, 11, 14-25.	2.5	24
124	Mindlin-Type Finite Elements for Piezoelectric Sandwich Plates. Journal of Intelligent Material Systems and Structures, 2000, 11, 14-25.	2.5	2
125	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
126	Delamination of active layers in piezoelectric laminates. Solid Mechanics and Its Applications, 1999, , 137-150.	0.2	0

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127	The Saint-Venant Problem for Monoclinic Piezoelectric Cylinders. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 1998, 78, 147-165.	1.6	21
128	The unilateral frictionless contact of a piezoelectric body with a rigid support. Mathematical and Computer Modelling, 1998, 28, 19-28.	2.0	64
129	Bounds on the overall properties of composites with debonded frictionless interfaces. Mechanics of Materials, 1998, 28, 23-32.	3.2	38
130	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
131	Blow-up of solutions of a nonlinear parabolic equation in damage mechanics. European Journal of Applied Mathematics, 1997, 8, 89-123.	2.9	12
132	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
133	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
134	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
135	Variational bounds for the overall properties of piezoelectric composites. Journal of the Mechanics and Physics of Solids, 1996, 44, 583-602.	4.8	73
136	A Consistent Theory of Thin Piezoelectric Plates. Journal of Intelligent Material Systems and Structures, 1996, 7, 372-389.	2.5	34
137	An Exact Three-Dimensional Solution for Simply Supported Rectangular Piezoelectric Plates. Journal of Applied Mechanics, Transactions ASME, 1996, 63, 628-638.	2.2	97
138	Mohr's arbelos. Meccanica, 1995, 30, 417-424.	2.0	4
139	On the Fiber-Governed Bimodular Constitutive Models. , 1995, , 113-128.		3
140	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
141	A potential theory for monotone multivalued operators. Quarterly of Applied Mathematics, 1993, 51, 613-631.	0.7	21
142	Refined Models for Vibration Analysis and Control of Thick Piezoelectric Laminates. , 0, , .		3
143	Relaxation and Block-Relaxation Procedures for the Dual Formulation of the Signorini-Coulomb Frictional Contact. , 0, , .		0