

Massimiliano Fraldi

List of Publications by Year in descending order

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Version: 2024-02-01

61
papers

1,161
citations

394286

19
h-index

414303

32
g-index

63
all docs

63
docs citations

63
times ranked

804
citing authors

#	ARTICLE	IF	CITATIONS
1	Analytical solutions for collapse mechanisms in tunnels with arbitrary cross sections. <i>International Journal of Solids and Structures</i> , 2010, 47, 216-223.	1.3	162
2	Topological optimization in hip prosthesis design. <i>Biomechanics and Modeling in Mechanobiology</i> , 2010, 9, 389-402.	1.4	87
3	Evaluation of impending collapse in circular tunnels by analytical and numerical approaches. <i>Tunnelling and Underground Space Technology</i> , 2011, 26, 507-516.	3.0	80
4	Is subvalvular repair worthwhile in severe ischemic mitral regurgitation? Subanalysis of the Papillary Muscle Approximation trial. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2017, 153, 286-295.e2.	0.4	53
5	Cells competition in tumor growth poroelasticity. <i>Journal of the Mechanics and Physics of Solids</i> , 2018, 112, 345-367.	2.3	44
6	Compliance mismatch and compressive wall stresses drive anomalous remodelling of pulmonary trunks reinforced with Dacron grafts. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016, 63, 287-302.	1.5	41
7	Stress-shielding, growth and remodeling of pulmonary artery reinforced with copolymer scaffold and transposed into aortic position. <i>Biomechanics and Modeling in Mechanobiology</i> , 2016, 15, 1141-1157.	1.4	37
8	Topologically engineered 3D printed architectures with superior mechanical strength. <i>Materials Today</i> , 2021, 48, 72-94.	8.3	37
9	An improved formulation for the assessment of the capacity load of circular rings and cylindrical shells under external pressure. Part 1. Analytical derivation. <i>Thin-Walled Structures</i> , 2011, 49, 1054-1061.	2.7	31
10	Identification of defects and strain error estimation for bending steel beams using time domain Brillouin distributed optical fiber sensors. <i>Smart Materials and Structures</i> , 2006, 15, 612-622.	1.8	30
11	Predictive factors of long-term results following valve repair in ischemic mitral valve prolapse. <i>International Journal of Cardiology</i> , 2016, 204, 218-228.	0.8	27
12	Reply. <i>Journal of the American College of Cardiology</i> , 2016, 68, 1147-1148.	1.2	26
13	Biomechanics drive histological wall remodeling of neo-aortic root: A mathematical model to study the expression levels of ki 67, metalloprotease, and apoptosis transition. <i>Journal of Biomedical Materials Research - Part A</i> , 2016, 104, 2785-2793.	2.1	25
14	Stability of tunnels according to depth and variability of rock mass parameters. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2019, 119, 222-229.	2.6	25
15	Towards an accurate assessment of UOE pipes under external pressure: Effects of geometric imperfection and material inhomogeneity. <i>Thin-Walled Structures</i> , 2013, 63, 147-162.	2.7	24
16	Delamination onset and design criteria of multilayer flexible packaging under high pressure treatments. <i>Innovative Food Science and Emerging Technologies</i> , 2014, 23, 39-53.	2.7	22
17	Simulating the ideal geometrical and biomechanical parameters of the pulmonary autograft to prevent failure in the Ross operation. <i>Interactive Cardiovascular and Thoracic Surgery</i> , 2018, 27, 269-276.	0.5	22
18	Inhomogeneous elastostatic problem solutions constructed from stress-associated homogeneous solutions. <i>Journal of the Mechanics and Physics of Solids</i> , 2004, 52, 2207-2233.	2.3	21

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19	An improved formulation for the assessment of the capacity load of circular rings and cylindrical shells under external pressure. Part 2. A comparative study with design codes prescriptions, experimental results and numerical simulations. <i>Thin-Walled Structures</i> , 2011, 49, 1062-1070.	2.7	21
20	An analytical model for the buckling of plates under mixed boundary conditions. <i>Engineering Structures</i> , 2012, 38, 78-88.	2.6	20
21	On the prediction of the collapse load of circular concrete columns confined by FRP. <i>Engineering Structures</i> , 2008, 30, 3247-3264.	2.6	19
22	Analysis of testing methods of pipelines for limit state design. <i>Applied Ocean Research</i> , 2008, 30, 297-304.	1.8	18
23	Influence of actual plastic hinge placement on the behavior of ductile frames. <i>Journal of Zhejiang University: Science A</i> , 2014, 15, 482-495.	1.3	18
24	Risk assessment of the impact of pyroclastic currents on the towns located around Vesuvio: a non-linear structural inverse analysis. <i>Bulletin of Volcanology</i> , 2003, 65, 547-561.	1.1	17
25	Nonlinear elasticity and buckling in the simplest soft-strut tensegrity paradigm. <i>International Journal of Non-Linear Mechanics</i> , 2018, 106, 80-88.	1.4	17
26	Chirality in the Torsion of Cylinders with Trigonal Symmetry. <i>Journal of Elasticity</i> , 2002, 69, 121-148.	0.9	16
27	Critical behavior of flat and stiffened shell structures through different kinematical models: A comparative investigation. <i>Thin-Walled Structures</i> , 2012, 60, 205-215.	2.7	15
28	Euler's Elastica-Based Biomechanics of the Papillary Muscle Approximation in Ischemic Mitral Valve Regurgitation: A Simple 2D Analytical Model. <i>Materials</i> , 2019, 12, 1518.	1.3	15
29	Retrieving acoustic energy densities and local pressure amplitudes in microfluidics by holographic time-lapse imaging. <i>Lab on A Chip</i> , 2018, 18, 1921-1927.	3.1	14
30	Mechanobiology predicts raft formations triggered by ligand-receptor activity across the cell membrane. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 141, 103974.	2.3	14
31	Damage detection in bending beams through Brillouin distributed optic-fibre sensor. <i>Bridge Structures</i> , 2005, 1, 355-363.	0.2	13
32	Burrowing below ground: interaction between soil mechanics and evolution of subterranean mammals. <i>Journal of the Royal Society Interface</i> , 2020, 17, 20190521.	1.5	12
33	The role of viscoelasticity and stress gradients on the outcome of conductive keratoplasty. <i>Biomechanics and Modeling in Mechanobiology</i> , 2011, 10, 397-412.	1.4	11
34	Patient-specific mobility assessment to monitor recovery after total hip arthroplasty. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2018, 232, 1048-1059.	1.0	11
35	Three dimensional bone mineral density changes in the femur over 1 year in primary total hip arthroplasty patients. <i>Clinical Biomechanics</i> , 2020, 78, 105092.	0.5	9
36	On singularities associated with the curvilinear anisotropic elastic symmetries. <i>International Journal of Non-Linear Mechanics</i> , 2005, 40, 361-371.	1.4	8

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37	Stealthy role of size-driven stresses in biomechanics of breast implants capsular contracture. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016, 64, 199-208.	1.5	8
38	TAVI in Lower Risk Patients. <i>Journal of the American College of Cardiology</i> , 2016, 67, 1380-1381.	1.2	8
39	Analysing the reasons of failure of surgical mitral repair approaches—do we need to better think in biomechanics?. <i>Journal of Thoracic Disease</i> , 2017, 9, S661-S664.	0.6	8
40	Use of bioresorbable scaffold for neopulmonary artery in simple transposition of great arteries: Tissue engineering moves steps in pediatric cardiac surgery. <i>International Journal of Cardiology</i> , 2015, 201, 639-643.	0.8	7
41	Disarrangements and instabilities in augmented one-dimensional hyperelasticity. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2018, 474, 20180312.	1.0	7
42	Stability Analysis of Circular Beams with Mixed-Mode Imperfections under Uniform Lateral Pressure. <i>Advances in Mechanical Engineering</i> , 2014, 6, 294507.	0.8	6
43	Biomechanics raises solution to avoid geometric mitral valve configuration abnormalities in ischemic mitral regurgitation. <i>Journal of Thoracic Disease</i> , 2017, 9, S624-S628.	0.6	6
44	Euler's elastica—based biomechanical assessment for neochordal insertion in the treatment of degenerative mitral valve repair. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2018, 155, 603-605.	0.4	6
45	An Analytical Approach to the Analysis of Inhomogeneous Pipes under External Pressure. <i>Journal of Applied Mathematics</i> , 2012, 2012, 1-14.	0.4	5
46	Bulky auxeticity, tensile buckling and deck-of-cards kinematics emerging from structured continua. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2021, 477, 20200729.	1.0	5
47	A lesson from earthquake engineering for selectively damaging cancer cell structures. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2021, 119, 104533.	1.5	5
48	Ultrasound waves in tumors via needle irradiation for precise medicine. <i>Scientific Reports</i> , 2022, 12, 6513.	1.6	5
49	On a general property of a class of homogenized porous media. <i>Mechanics Research Communications</i> , 2001, 28, 213-221.	1.0	4
50	Design of Functionally Graded Beam of Aluminium Foam for Civil Structural Application. <i>Key Engineering Materials</i> , 0, 710, 65-70.	0.4	4
51	Lyapunov stability of competitive cells dynamics in tumor mechanobiology. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2021, 37, 244-263.	1.5	4
52	Competition between delamination and tearing in multiple peeling problems. <i>Journal of the Royal Society Interface</i> , 2019, 16, 20190388.	1.5	3
53	A class of periodic lattices for tuning elastic instabilities. <i>Extreme Mechanics Letters</i> , 2022, 55, 101839.	2.0	3
54	On the equilibrium bifurcation of axially deformable holonomic systems: solution of a long-standing enigma. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2021, 477, 20210327.	1.0	2

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55	Multiscale geometry and mechanics of lipid monolayer collapse. <i>Current Topics in Membranes</i> , 2021, 87, 1-45.	0.5	2
56	Steady-State Thermoelastic Analytical Solutions for Insulated Pipelines. <i>Mathematical Problems in Engineering</i> , 2016, 2016, 1-13.	0.6	1
57	Solutions for Optical Fibres as n-ply FGM Cylinders and Applications. <i>AIP Conference Proceedings</i> , 2008, , .	0.3	0
58	Thermo-mechanical response of poly(methyl methacrylate) (PMMA) large volumes exposed to time-dependent environmental conditions. <i>Mechanics of Time-Dependent Materials</i> , 2014, 18, 253-273.	2.3	0
59	Holographic imaging and acoustofluidics: an advantageous combination. , 2019, , .		0
60	Holographic imaging for tracking and phase retrieval in acoustophoresis platforms. , 2019, , .		0
61	A 3D Griffith peeling model to unify and generalize single and double peeling theories. <i>Meccanica</i> , 2022, 57, 1125-1138.	1.2	0