Salvatore Federico

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Nonlinear elasticity of biological tissues with statistical fibre orientation. Journal of the Royal Society Interface, 2010, 7, 955-966.	3.4	119
2	On the anisotropy and inhomogeneity of permeability in articular cartilage. Biomechanics and Modeling in Mechanobiology, 2008, 7, 367-378.	2.8	98
3	Towards an analytical model of soft biological tissues. Journal of Biomechanics, 2008, 41, 3309-3313.	2.1	90
4	A transversely isotropic, transversely homogeneous microstructural-statistical model of articular cartilage. Journal of Biomechanics, 2005, 38, 2008-2018.	2.1	87
5	Elasticity and permeability of porous fibre-reinforced materials under large deformations. Mechanics of Materials, 2012, 44, 58-71.	3.2	83
6	Growth, mass transfer, and remodeling in fiber-reinforced, multi-constituent materials. International Journal of Non-Linear Mechanics, 2012, 47, 388-401.	2.6	71
7	Poroelastic materials reinforced by statistically oriented fibres--numerical implementation and application to articular cartilage. IMA Journal of Applied Mathematics, 2014, 79, 1027-1059.	1.6	66
8	On the permeability of fibre-reinforced porous materials. International Journal of Solids and Structures, 2008, 45, 2160-2172.	2.7	57
9	A transversely isotropic composite with a statistical distribution of spheroidal inclusions: a geometrical approach to overall properties. Journal of the Mechanics and Physics of Solids, 2004, 52, 2309-2327.	4.8	54
10	An articular cartilage contact model based on real surface geometry. Journal of Biomechanics, 2005, 38, 179-184.	2.1	41
11	Remodelling in statistically oriented fibre-reinforced materials and biological tissues. Mathematics and Mechanics of Solids, 2015, 20, 1107-1129.	2.4	40
12	Effect of Fluid Boundary Conditions on Joint Contact Mechanics and Applications to the Modeling of Osteoarthritic Joints. Journal of Biomechanical Engineering, 2004, 126, 220-225.	1.3	37
13	Considerations on Joint and Articular Cartilage Mechanics. Biomechanics and Modeling in Mechanobiology, 2006, 5, 64-81.	2.8	37
14	On the constitutive modelling of recruitment and damage of collagen fibres in soft biological tissues. European Journal of Mechanics, A/Solids, 2018, 72, 483-496.	3.7	35
15	Mechanical behaviour of in-situ chondrocytes subjected to different loading rates: a finite element study. Biomechanics and Modeling in Mechanobiology, 2012, 11, 983-993.	2.8	34
16	Volumetric-Distortional Decomposition of Deformation and Elasticity Tensor. Mathematics and Mechanics of Solids, 2010, 15, 672-690.	2.4	33
17	Covariant formulation of the tensor algebra of non-linear elasticity. International Journal of Non-Linear Mechanics, 2012, 47, 273-284.	2.6	32
18	Extracellular matrix integrity affects the mechanical behaviour of in-situ chondrocytes under compression. Journal of Biomechanics, 2014, 47, 1004-1013.	2.1	31

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19	The Mechanical Behaviour of Chondrocytes Predicted with a Micro-structural Model of Articular Cartilage. Biomechanics and Modeling in Mechanobiology, 2007, 6, 139-150.	2.8	28
20	Convex Fung-type potentials for biological tissues. Meccanica, 2008, 43, 279-288.	2.0	28
21	An energetic approach to the analysis of anisotropic hyperelastic materials. International Journal of Engineering Science, 2008, 46, 164-181.	5.0	27
22	The linear elasticity tensor of incompressible materials. Mathematics and Mechanics of Solids, 2015, 20, 643-662.	2.4	26
23	Mechanical model of the breast for the prediction of deformation during imaging. Medical Engineering and Physics, 2013, 35, 470-478.	1.7	25
24	A depth-dependent model of the pericellular microenvironment of chondrocytes in articular cartilage. Computer Methods in Biomechanics and Biomedical Engineering, 2011, 14, 657-664.	1.6	20
25	An Allenâ€“Cahn approach to the remodelling of fibre-reinforced anisotropic materials. Journal of Engineering Mathematics, 2018, 109, 139-172.	1.2	19
26	Mechanical Behaviour of the Human Atria. Annals of Biomedical Engineering, 2013, 41, 1478-1490.	2.5	18
27	Collagen fibres determine the crack morphology in articular cartilage. Acta Biomaterialia, 2021, 126, 301-314.	8.3	18
28	Tensor representation of magnetostriction for all crystal classes. Mathematics and Mechanics of Solids, 2019, 24, 2814-2843.	2.4	15
29	Effect of strain rate on transient local strain variations in articular cartilage. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 95, 60-66.	3.1	14
30	A method to estimate the elastic properties of the extracellular matrix of articular cartilage. Journal of Biomechanics, 2004, 37, 401-404.	2.1	13
31	On the linear elasticity of porous materials. International Journal of Mechanical Sciences, 2010, 52, 175-182.	6.7	12
32	Non-Linear Model for Compression Tests on Articular Cartilage. Journal of Biomechanical Engineering, 2015, 137, .	1.3	12
33	Non-Darcian flow in fibre-reinforced biological tissues. Meccanica, 2017, 52, 3299-3320.	2.0	12
34	Anelastic reorganisation of fibre-reinforced biological tissues. Computing and Visualization in Science, 2019, 20, 95-109.	1.2	12
35	Some remarks on metric and deformation. Mathematics and Mechanics of Solids, 2015, 20, 522-539.	2.4	11
36	Force measurements during running on different instrumented treadmills. Journal of Biomechanics, 2019, 84, 263-268.	2.1	11

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37	Effect of structural distortions on articular cartilage permeability under large deformations. Biomechanics and Modeling in Mechanobiology, 2020, 19, 317-334.	2.8	11
38	Efficient evaluation of the material response of tissues reinforced by statistically oriented fibres. Zeitschrift Fur Angewandte Mathematik Und Physik, 2016, 67, 1.	1.4	10
39	Material description of fluxes in terms of differential forms. Continuum Mechanics and Thermodynamics, 2016, 28, 379-390.	2.2	10
40	A compression system for studying depth-dependent mechanical properties of articular cartilage under dynamic loading conditions. Medical Engineering and Physics, 2018, 60, 103-108.	1.7	10
41	Eshelby force and power for uniform bodies. Acta Mechanica, 2019, 230, 1663-1684.	2.1	10
42	Growth and remodelling from the perspective of Noetherâ€™s theorem. Mechanics Research Communications, 2019, 97, 89-95.	1.8	10
43	Magnetostriction in transversely isotropic hexagonal crystals. Physical Review B, 2020, 101, .	3.2	10
44	Green-Naghdi rate of the Kirchhoff stress and deformation rate: the elasticity tensor. Zeitschrift Fur Angewandte Mathematik Und Physik, 2015, 66, 1143-1163.	1.4	9
45	Eshelbyâ€™s inclusion theory in light of Noetherâ€™s theorem. Mathematics and Mechanics of Complex Systems, 2019, 7, 247-285.	0.9	9
46	A biomechanical evaluation of <scp>CNT</scp>â€grown bone. Journal of Biomedical Materials Research - Part A, 2016, 104, 465-475.	4.0	8
47	Porous Materials with Statistically Oriented Reinforcing Fibres. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2015, , 49-120.	0.6	8
48	Restoration of the symmetries broken by reversible growth in hyperelastic bodies. Theoretical and Applied Mechanics, 2003, , 311-331.	0.3	8
49	A semi-analytical solution for the confined compression ofÂhydrated soft tissue. Meccanica, 2009, 44, 197-205.	2.0	7
50	Relation between Eshelby stress and Eshelby fourth-order tensor within an ellipsoidal inclusion. Acta Mechanica, 2017, 228, 1045-1069.	2.1	7
51	Strain-mediated propagation of magnetic domain-walls in cubic magnetostrictive materials. Ricerche Di Matematica, 2021, 70, 81-97.	1.0	7
52	Orthotropic hydraulic permeability of arrays of parallel cylinders. Physical Review E, 2017, 96, 033112.	2.1	6
53	Consistent numerical implementation of hypoelastic constitutive models. Zeitschrift Fur Angewandte Mathematik Und Physik, 2020, 71, 1.	1.4	6
54	The role of material in homogeneities in biological growth. Theoretical and Applied Mechanics, 2005, 32, 21-38.	0.3	6

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55	The Protective Function of Directed Asymmetry in the Pericellular Matrix Enveloping Chondrocytes. Annals of Biomedical Engineering, 2022, 50, 39-55.	2.5	6
56	Finite element modeling of finite deformable, biphasic biological tissues with transversely isotropic statistically distributed fibers: toward a practical solution. Zeitschrift Fur Angewandte Mathematik Und Physik, 2016, 67, 1.	1.4	5
57	Transversely isotropic higher-order averaged structure tensors. Zeitschrift Fur Angewandte Mathematik Und Physik, 2017, 68, 1.	1.4	5
58	Fluorescence recovery after photobleaching: direct measurement of diffusion anisotropy. Biomechanics and Modeling in Mechanobiology, 2020, 19, 2397-2412.	2.8	5
59	Directed transport of Brownian particles in a changing temperature field. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 015002.	2.1	4
60	Effect of cracks on the local deformations of articular cartilage. Journal of Biomechanics, 2020, 110, 109970.	2.1	4
61	Analysis of solitary waves in fluid-filled thin-walled electroactive tubes. Mechanics Research Communications, 2021, 113, 103654.	1.8	4
62	Eshelbyâ€™s inclusion problem in large deformations. Zeitschrift Fur Angewandte Mathematik Und Physik, 2021, 72, 1.	1.4	4
63	Theory of uniformity applied to elastic dielectric materials and piezoelectricity. European Journal of Mechanics, A/Solids, 2022, 91, 104391.	3.7	4
64	Remodelling of biological tissues with fibre recruitment and reorientation in the light of the theory of material uniformity. Mechanics Research Communications, 2019, 96, 56-61.	1.8	3
65	Chondrocyte Deformations Under Mild Dynamic Loading Conditions. Annals of Biomedical Engineering, 2021, 49, 846-857.	2.5	3
66	The Truesdell rate in Continuum Mechanics. Zeitschrift Fur Angewandte Mathematik Und Physik, 2022, 73, 1.	1.4	3
67	A continuum model of negatively charged rods finely dispersed in a positively charged fluid. Mechanics Research Communications, 2011, 38, 574-578.	1.8	1
68	Reply to letter to the editor by Dr. Robert W. Mann. Journal of Biomechanics, 2005, 38, 1742-1743.	2.1	0
69	Interaction between growth and transport phenomena in living mixtures. Journal of Physics: Conference Series, 2007, 62, 43-71.	0.4	0
70	Directed transport of Brownian particles in a changing temperature field. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 229801.	2.1	0
71	Porous Materials Reinforced by Statistically Oriented Fibres. , 2010, , .		0
72	GRADIENT-DEPENDENT CONSTITUTIVE LAWS FOR A MODEL OF MICROCRACKED BODIES. International Journal for Multiscale Computational Engineering, 2012, 10, 581-597.	1.2	0

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73	Microstructural computational modelling of soft tissues. AIP Conference Proceedings, 2015, , .	0.4	0
74	Preface to the Special Issue in Memory of Prof. Gaetano Giaquinta (1945â€“2016). Mathematics and Mechanics of Solids, 2020, 25, 1042-1045.	2.4	0
75	The domain of existence of solitary waves in fluid-filled thin elastic tubes. Mathematics and Mechanics of Solids, 2021, 26, 1354-1375.	2.4	0
76	Anisotropic Diffusivity Tensor in Articular Cartilage: Effective Medium Approach. Journal of Biomechanical Engineering, 2020, 142, .	1.3	0