Paola Nardinocchi

List of Publications by Year
in descending order

80 papers	1,356 citations	430442 18 h-index	377514 34 g-index
83 all docs	83 docs citations	83 times ranked	1001 citing authors

#	Article	IF	Citations
1	Morphing of soft structures driven by active swelling: a numerical study. International Journal of Non-Linear Mechanics, 2022, 141, 103951.	1.4	1
2	Passive and active fiber reorientation in anisotropic materials. International Journal of Engineering Science, 2022, 176, 103688.	2.7	9
3	Patient-specific modeling of left ventricle mechanics. Acta Mechanica Sinica/Lixue Xuebao, 2022, 38, .	1.5	3
4	Mechanics of active gel spheres under bulk contraction. International Journal of Mechanical Sciences, 2021, 193, 106147.	3.6	8
5	A structurally frame-indifferent model for anisotropic visco-hyperelastic materials. Journal of the Mechanics and Physics of Solids, 2021, 147, 104247.	2.3	14
6	Dehydration-induced mechanical instabilities in active elastic spherical shells. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2021, 477, .	1.0	3
7	Local and global energies for shape analysis in medical imaging. International Journal for Numerical Methods in Biomedical Engineering, 2020, 36, e3252.	1.0	3
8	Dynamics of active swelling in contractile polymer gels. Journal of the Mechanics and Physics of Solids, 2020, 135, 103807.	2.3	8
9	Modeling solvent dynamics in polymers with solvent-filled cavities. Mechanics of Soft Materials, 2020, 2, 1.	0.4	2
10	Shape-shifting of polymer beams and shells due to oil extraction. Extreme Mechanics Letters, 2020, 36, 100655.	2.0	1
11	Swelling-induced eversion and flattening in naturally curved gel beams. International Journal of Mechanical Sciences, 2019, 161-162, 105071.	3.6	3
12	Nonâ€invasive prediction of genotype positiveâ€“phenotype negative in hypertrophic cardiomyopathy by 3D modern shape analysis. Experimental Physiology, 2019, 104, 1688-1700.	0.9	11
13	Enforcing shaping of thin gel sheets by anisotropic swelling. Mechanics of Materials, 2019, 139, 103199.	1.7	4
14	Swelling and shrinking in prestressed polymer gels: an incremental stressâ€“diffusion analysis. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2019, 475, 20190174.	1.0	9
15	Magneto-induced remodelling of fibre-reinforced elastomers. International Journal of Non-Linear Mechanics, 2019, 117, 103230.	1.4	8
16	Torque-induced reorientation in active fibre-reinforced materials. Soft Matter, 2019, 15, 2081-2091.	1.2	12
17	Improving performance of 3D speckle tracking in arterial hypertension and paroxysmal atrial fibrillation by using novel strain parameters. Scientific Reports, 2019, 9, 7382.	1.6	14
18	Diffusion-driven stress relaxation of gels under incremental planar extensions. Mechanics of Materials, 2019, 134, 106-114.	1.7	1

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19	Swelling effects on localized adhesion of an elastic ribbon. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2019, 475, 20190067.	1.0	1
20	The decomposition of deformation: New metrics to enhance shape analysis in medical imaging.. Medical Image Analysis, 2018, 46, 35-56.	7.0	9
21	Driving water cavitation in a hydrogel cavity. Soft Matter, 2018, 14, 2310-2321.	1.2	14
22	Swelling-induced bending and pumping in homogeneous thin sheets. Journal of Applied Physics, 2018, 124, .	1.1	10
23	Thermodynamically consistent electro-chemo-mechanical model for polymer membranes. , 2018, , .		1
24	Growth-induced compatible strains. Mathematics and Mechanics of Solids, 2017, 22, 62-71.	1.5	12
25	Unexpected hardening effects in bilayered gel beams. Meccanica, 2017, 52, 3471-3480.	1.2	8
26	Mathematical model for isometric and isotonic muscle contractions. Journal of Theoretical Biology, 2017, 425, 1-10.	0.8	12
27	Transient instabilities in the swelling dynamics of a hydrogel sphere. Journal of Applied Physics, 2017, 122, .	1.1	28
28	Homeostatic Left Heart integration and disintegration links atrio-ventricular covariationâ€™s dyshomeostasis in Hypertrophic Cardiomyopathy. Scientific Reports, 2017, 7, 6257.	1.6	16
29	Swelling-induced wrinkling in layered gel beams. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20170454.	1.0	11
30	Actuation performances of anisotropic gels. Journal of Applied Physics, 2016, 120, .	1.1	14
31	A comparative analysis of the strain-line pattern in the human left ventricle: experiments vs modelling. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2016, 4, 164-173.	1.3	6
32	Geometry and mechanics of thin growing bilayers. Soft Matter, 2016, 12, 4435-4442.	1.2	72
33	Left Atrial trajectory impairment in Hypertrophic Cardiomyopathy disclosed by Geometric Morphometrics and Parallel Transport. Scientific Reports, 2016, 6, 34906.	1.6	9
34	Systo-Diastolic LV Shape Analysis by Geometric Morphometrics and Parallel Transport Highly Discriminates Myocardial Infarction. Lecture Notes in Computer Science, 2016, , 119-129.	1.0	7
35	Temperature-driven volume transition in hydrogels: Phase-coexistence and interface localization. International Journal of Non-Linear Mechanics, 2016, 81, 115-121.	1.4	2
36	Finite bending solutions for layered gel beams. International Journal of Solids and Structures, 2016, 90, 228-235.	1.3	17

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37	Steady and transient analysis of anisotropic swelling in fibered gels. Journal of Applied Physics, 2015, 118, .	1.1	20
38	Mechanics of Bioâ€“hybrid Systems. Procedia IUTAM, 2015, 12, 145-153.	1.2	0
39	Non-invasive assessment of functional strain lines in the real human left ventricle via speckle tracking echocardiography. Journal of Biomechanics, 2015, 48, 465-471.	0.9	19
40	Evaluation of the strain-line patterns in a human left ventricle: a simulation study. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 790-798.	0.9	17
41	Morphing of geometric composites via residual swelling. Soft Matter, 2015, 11, 5812-5820.	1.2	80
42	STRAIN ANALYSIS OF CARDIAC TISSUES FROM 3D ULTRASOUND IMAGES USING SNAKES AND SPECKLE TRACKING. Journal of Mechanics in Medicine and Biology, 2015, 15, 1540012.	0.3	1
43	Anisotropic swelling of thin gel sheets. Soft Matter, 2015, 11, 1492-1499.	1.2	34
44	Continuum Mechanics Meets Echocardiographic Imaging: Investigation on the Principal Strain Lines in Human Left Ventricle. Lecture Notes in Computational Vision and Biomechanics, 2015, , 41-54.	0.5	2
45	A New 4D Trajectory-Based Approach Unveils Abnormal LV Revolution Dynamics in Hypertrophic Cardiomyopathy. PLoS ONE, 2015, 10, e0122376.	1.1	16
46	Swelling dynamics of a thin elastomeric sheet under uniaxial pre-stretch. Journal of Applied Physics, 2014, 115, 083505.	1.1	14
47	Actuation and buckling effects in IPMCs. , 2014, , .		1
48	Multiphysics of bio-hybrid systems: shape control and electro-induced motion. Smart Materials and Structures, 2014, 23, 045043.	1.8	7
49	Buckling dynamics of a solvent-stimulated stretched elastomeric sheet. Soft Matter, 2014, 10, 2800.	1.2	23
50	Swelling-induced and controlled curving in layered gel beams. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2014, 470, 20140467.	1.0	43
51	4D-Analysis of Left Ventricular Heart Cycle Using Procrustes Motion Analysis. PLoS ONE, 2014, 9, e86896.	1.1	27
52	Curled actuated shapes of ionic polymer metal composites strips. Journal of Applied Physics, 2013, 113, .	1.1	28
53	The multiplicative decomposition of the deformation gradient in the multiphysics modeling of ionic polymers. International Journal of Non-Linear Mechanics, 2013, 51, 112-120.	1.4	34
54	Strain analysis of cardiac tissues from 3D ultrasound images through speckle tracking. , 2013, , .		0

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55	The elastic metric: A review of elasticity with large distortions. International Journal of Non-Linear Mechanics, 2013, 56, 34-42.	1.4	22
56	Transient analysis of swelling-induced large deformations in polymer gels. Journal of the Mechanics and Physics of Solids, 2013, 61, 205-218.	2.3	156
57	Electromechanical modeling of anisotropic cardiac tissues. Mathematics and Mechanics of Solids, 2013, 18, 576-591.	1.5	10
58	On the strainâ€"line patterns in a real human left ventricle. , 2013, , 19-24.		3
59	Strain induced shape formation in fibred cylindrical tubes. Journal of the Mechanics and Physics of Solids, 2012, 60, 1420-1431.	2.3	14
60	Reduced models of swelling-induced bending of gel bars. International Journal of Solids and Structures, 2012, 49, 1399-1405.	1.3	31
61	Advantages in the torsional performances of a simplified cylindrical geometry due to transmural differential contractile properties. European Journal of Mechanics, A/Solids, 2012, 36, 173-179.	2.1	4
62	A simplified mechanical modeling for myocardial contractions and the ventricular pressureâ€"volume relationships. Mechanics Research Communications, 2011, 38, 532-535.	1.0	8
63	Torsion of the human left ventricle: Experimental analysis and computational modeling. Progress in Biophysics and Molecular Biology, 2011, 107, 112-121.	1.4	38
64	Thermodynamically based multiphysic modeling of ionic polymer metal composites. Journal of Intelligent Material Systems and Structures, 2011, 22, 1887-1897.	1.4	66
65	Torsional deformations in incompressible fibre-reinforced cylindrical pipes. European Journal of Mechanics, A/Solids, 2010, 29, 266-273.	2.1	4
66	Electromechanical Modelling of Cardiac Tissue. , 2010, , 421-449.		4
67	An electromechanical model of cardiac tissue: Constitutive issues and electrophysiological effects. Progress in Biophysics and Molecular Biology, 2008, 97, 562-573.	1.4	107
68	On the Active Response of Soft Living Tissues. Journal of Elasticity, 2007, 88, 27-39.	0.9	102
69	A one-dimensional model for blood flow in prestressed vessels. European Journal of Mechanics, A/Solids, 2005, 24, 23-33.	2.1	11
70	Levinson-Type Benchmarks for Slide-Clamped and Elastically Supported Plates. Journal of Elasticity, 2003, 73, 211-220.	0.9	5
71	Constitutive identification of affine rods. Mechanics Research Communications, 2003, 30, 61-68.	1.0	0
72	The Influence of Initial Stresses on Blood Vessel Mechanics. Journal of Mechanics in Medicine and Biology, 2003, 03, 215-229.	0.3	1

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73	Modelling junctions of thin plates. European Journal of Mechanics, A/Solids, 2002, 21, 523-534.	2.1	5
74	A direct theory of affine rods. European Journal of Mechanics, A/Solids, 2002, 21, 653-667.	2.1	6
75	Angle Plates. Journal of Elasticity, 2001, 63, 19-53.	0.9	4
76	A direct theory of affine bodies. International Journal of Engineering Science, 2000, 38, 865-878.	2.7	3
77	Title is missing!. Meccanica, 1998, 33, 565-576.	1.2	1
78	The equations of Reissner-Mindlin plates obtained by the method of internal constraints. Meccanica, 1994, 29, 143-157.	1.2	19
79	Giant Displacements in IPMC-Based Structures: A Preliminary Study. Advanced Materials Research, 0, 745, 119-128.	0.3	1
80	Morphing of soft tubes by anisotropic growth. Acta Mechanica, 0, , 1.	1.1	0