

# Paola Nardinocchi

## List of Publications by Year in descending order

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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	Transient analysis of swelling-induced large deformations in polymer gels. <i>Journal of the Mechanics and Physics of Solids</i> , 2013, 61, 205-218.	2.3	156
2	An electromechanical model of cardiac tissue: Constitutive issues and electrophysiological effects. <i>Progress in Biophysics and Molecular Biology</i> , 2008, 97, 562-573.	1.4	107
3	On the Active Response of Soft Living Tissues. <i>Journal of Elasticity</i> , 2007, 88, 27-39.	0.9	102
4	Morphing of geometric composites via residual swelling. <i>Soft Matter</i> , 2015, 11, 5812-5820.	1.2	80
5	Geometry and mechanics of thin growing bilayers. <i>Soft Matter</i> , 2016, 12, 4435-4442.	1.2	72
6	Thermodynamically based multiphysic modeling of ionic polymer metal composites. <i>Journal of Intelligent Material Systems and Structures</i> , 2011, 22, 1887-1897.	1.4	66
7	Swelling-induced and controlled curving in layered gel beams. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2014, 470, 20140467.	1.0	43
8	Torsion of the human left ventricle: Experimental analysis and computational modeling. <i>Progress in Biophysics and Molecular Biology</i> , 2011, 107, 112-121.	1.4	38
9	The multiplicative decomposition of the deformation gradient in the multiphysics modeling of ionic polymers. <i>International Journal of Non-Linear Mechanics</i> , 2013, 51, 112-120.	1.4	34
10	Anisotropic swelling of thin gel sheets. <i>Soft Matter</i> , 2015, 11, 1492-1499.	1.2	34
11	Reduced models of swelling-induced bending of gel bars. <i>International Journal of Solids and Structures</i> , 2012, 49, 1399-1405.	1.3	31
12	Curled actuated shapes of ionic polymer metal composites strips. <i>Journal of Applied Physics</i> , 2013, 113, .	1.1	28
13	Transient instabilities in the swelling dynamics of a hydrogel sphere. <i>Journal of Applied Physics</i> , 2017, 122, .	1.1	28
14	4D-Analysis of Left Ventricular Heart Cycle Using Procrustes Motion Analysis. <i>PLoS ONE</i> , 2014, 9, e86896.	1.1	27
15	Buckling dynamics of a solvent-stimulated stretched elastomeric sheet. <i>Soft Matter</i> , 2014, 10, 2800.	1.2	23
16	The elastic metric: A review of elasticity with large distortions. <i>International Journal of Non-Linear Mechanics</i> , 2013, 56, 34-42.	1.4	22
17	Steady and transient analysis of anisotropic swelling in fibered gels. <i>Journal of Applied Physics</i> , 2015, 118, .	1.1	20
18	The equations of Reissner-Mindlin plates obtained by the method of internal constraints. <i>Meccanica</i> , 1994, 29, 143-157.	1.2	19

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19	Non-invasive assessment of functional strain lines in the real human left ventricle via speckle tracking echocardiography. <i>Journal of Biomechanics</i> , 2015, 48, 465-471.	0.9	19
20	Evaluation of the strain-line patterns in a human left ventricle: a simulation study. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2015, 18, 790-798.	0.9	17
21	Finite bending solutions for layered gel beams. <i>International Journal of Solids and Structures</i> , 2016, 90, 228-235.	1.3	17
22	Homeostatic Left Heart integration and disintegration links atrio-ventricular covariation's dyshomeostasis in Hypertrophic Cardiomyopathy. <i>Scientific Reports</i> , 2017, 7, 6257.	1.6	16
23	A New 4D Trajectory-Based Approach Unveils Abnormal LV Revolution Dynamics in Hypertrophic Cardiomyopathy. <i>PLoS ONE</i> , 2015, 10, e0122376.	1.1	16
24	Strain induced shape formation in fibred cylindrical tubes. <i>Journal of the Mechanics and Physics of Solids</i> , 2012, 60, 1420-1431.	2.3	14
25	Swelling dynamics of a thin elastomeric sheet under uniaxial pre-stretch. <i>Journal of Applied Physics</i> , 2014, 115, 083505.	1.1	14
26	Actuation performances of anisotropic gels. <i>Journal of Applied Physics</i> , 2016, 120, .	1.1	14
27	Driving water cavitation in a hydrogel cavity. <i>Soft Matter</i> , 2018, 14, 2310-2321.	1.2	14
28	Improving performance of 3D speckle tracking in arterial hypertension and paroxysmal atrial fibrillation by using novel strain parameters. <i>Scientific Reports</i> , 2019, 9, 7382.	1.6	14
29	A structurally frame-indifferent model for anisotropic visco-hyperelastic materials. <i>Journal of the Mechanics and Physics of Solids</i> , 2021, 147, 104247.	2.3	14
30	Growth-induced compatible strains. <i>Mathematics and Mechanics of Solids</i> , 2017, 22, 62-71.	1.5	12
31	Mathematical model for isometric and isotonic muscle contractions. <i>Journal of Theoretical Biology</i> , 2017, 425, 1-10.	0.8	12
32	Torque-induced reorientation in active fibre-reinforced materials. <i>Soft Matter</i> , 2019, 15, 2081-2091.	1.2	12
33	A one-dimensional model for blood flow in prestressed vessels. <i>European Journal of Mechanics, A/Solids</i> , 2005, 24, 23-33.	2.1	11
34	Swelling-induced wrinkling in layered gel beams. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2017, 473, 20170454.	1.0	11
35	Non-invasive prediction of genotype positive phenotype negative in hypertrophic cardiomyopathy by 3D modern shape analysis. <i>Experimental Physiology</i> , 2019, 104, 1688-1700.	0.9	11
36	Electromechanical modeling of anisotropic cardiac tissues. <i>Mathematics and Mechanics of Solids</i> , 2013, 18, 576-591.	1.5	10

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37	Swelling-induced bending and pumping in homogeneous thin sheets. <i>Journal of Applied Physics</i> , 2018, 124, .	1.1	10
38	Left Atrial trajectory impairment in Hypertrophic Cardiomyopathy disclosed by Geometric Morphometrics and Parallel Transport. <i>Scientific Reports</i> , 2016, 6, 34906.	1.6	9
39	The decomposition of deformation: New metrics to enhance shape analysis in medical imaging.. <i>Medical Image Analysis</i> , 2018, 46, 35-56.	7.0	9
40	Swelling and shrinking in prestressed polymer gels: an incremental stress–diffusion analysis. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2019, 475, 20190174.	1.0	9
41	Passive and active fiber reorientation in anisotropic materials. <i>International Journal of Engineering Science</i> , 2022, 176, 103688.	2.7	9
42	A simplified mechanical modeling for myocardial contractions and the ventricular pressure–volume relationships. <i>Mechanics Research Communications</i> , 2011, 38, 532-535.	1.0	8
43	Unexpected hardening effects in bilayered gel beams. <i>Meccanica</i> , 2017, 52, 3471-3480.	1.2	8
44	Magneto-induced remodelling of fibre-reinforced elastomers. <i>International Journal of Non-Linear Mechanics</i> , 2019, 117, 103230.	1.4	8
45	Dynamics of active swelling in contractile polymer gels. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 135, 103807.	2.3	8
46	Mechanics of active gel spheres under bulk contraction. <i>International Journal of Mechanical Sciences</i> , 2021, 193, 106147.	3.6	8
47	Multiphysics of bio-hybrid systems: shape control and electro-induced motion. <i>Smart Materials and Structures</i> , 2014, 23, 045043.	1.8	7
48	Systo-Diastolic LV Shape Analysis by Geometric Morphometrics and Parallel Transport Highly Discriminates Myocardial Infarction. <i>Lecture Notes in Computer Science</i> , 2016, , 119-129.	1.0	7
49	A direct theory of affine rods. <i>European Journal of Mechanics, A/Solids</i> , 2002, 21, 653-667.	2.1	6
50	A comparative analysis of the strain-line pattern in the human left ventricle: experiments vs modelling. <i>Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization</i> , 2016, 4, 164-173.	1.3	6
51	Modelling junctions of thin plates. <i>European Journal of Mechanics, A/Solids</i> , 2002, 21, 523-534.	2.1	5
52	Levinson-Type Benchmarks for Slide-Clamped and Elastically Supported Plates. <i>Journal of Elasticity</i> , 2003, 73, 211-220.	0.9	5
53	Angle Plates. <i>Journal of Elasticity</i> , 2001, 63, 19-53.	0.9	4
54	Torsional deformations in incompressible fibre-reinforced cylindrical pipes. <i>European Journal of Mechanics, A/Solids</i> , 2010, 29, 266-273.	2.1	4

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55	Advantages in the torsional performances of a simplified cylindrical geometry due to transmural differential contractile properties. <i>European Journal of Mechanics, A/Solids</i> , 2012, 36, 173-179.	2.1	4
56	Enforcing shaping of thin gel sheets by anisotropic swelling. <i>Mechanics of Materials</i> , 2019, 139, 103199.	1.7	4
57	Electromechanical Modelling of Cardiac Tissue. , 2010, , 421-449.		4
58	A direct theory of affine bodies. <i>International Journal of Engineering Science</i> , 2000, 38, 865-878.	2.7	3
59	Swelling-induced eversion and flattening in naturally curved gel beams. <i>International Journal of Mechanical Sciences</i> , 2019, 161-162, 105071.	3.6	3
60	Local and global energies for shape analysis in medical imaging. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2020, 36, e3252.	1.0	3
61	On the strainâ€™line patterns in a real human left ventricle. , 2013, , 19-24.		3
62	Dehydration-induced mechanical instabilities in active elastic spherical shells. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2021, 477, .	1.0	3
63	Patient-specific modeling of left ventricle mechanics. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2022, 38, .	1.5	3
64	Temperature-driven volume transition in hydrogels: Phase-coexistence and interface localization. <i>International Journal of Non-Linear Mechanics</i> , 2016, 81, 115-121.	1.4	2
65	Modeling solvent dynamics in polymers with solvent-filled cavities. <i>Mechanics of Soft Materials</i> , 2020, 2, 1.	0.4	2
66	Continuum Mechanics Meets Echocardiographic Imaging: Investigation on the Principal Strain Lines in Human Left Ventricle. <i>Lecture Notes in Computational Vision and Biomechanics</i> , 2015, , 41-54.	0.5	2
67	Title is missing!. <i>Meccanica</i> , 1998, 33, 565-576.	1.2	1
68	The Influence of Initial Stresses on Blood Vessel Mechanics. <i>Journal of Mechanics in Medicine and Biology</i> , 2003, 03, 215-229.	0.3	1
69	Giant Displacements in IPMC-Based Structures: A Preliminary Study. <i>Advanced Materials Research</i> , 0, 745, 119-128.	0.3	1
70	Actuation and buckling effects in IPMCs. , 2014, , .		1
71	STRAIN ANALYSIS OF CARDIAC TISSUES FROM 3D ULTRASOUND IMAGES USING SNAKES AND SPECKLE TRACKING. <i>Journal of Mechanics in Medicine and Biology</i> , 2015, 15, 1540012.	0.3	1
72	Diffusion-driven stress relaxation of gels under incremental planar extensions. <i>Mechanics of Materials</i> , 2019, 134, 106-114.	1.7	1

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73	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
74	Shape-shifting of polymer beams and shells due to oil extraction. Extreme Mechanics Letters, 2020, 36, 100655.	2.0	1
75	Thermodynamically consistent electro-chemo-mechanical model for polymer membranes. , 2018, , .		1
76	Morphing of soft structures driven by active swelling: a numerical study. International Journal of Non-Linear Mechanics, 2022, 141, 103951.	1.4	1
77	Constitutive identification of affine rods. Mechanics Research Communications, 2003, 30, 61-68.	1.0	0
78	Strain analysis of cardiac tissues from 3D ultrasound images through speckle tracking. , 2013, , .		0
79	Mechanics of Bio-“hybrid Systems. Procedia IUTAM, 2015, 12, 145-153.	1.2	0
80	Morphing of soft tubes by anisotropic growth. Acta Mechanica, 0, , 1.	1.1	0