Alain Goriely

List of Publications by Year in Descending Order

257 papers	12,825 citations	49 h-index	108 g-index
276 ext. papers	14,460 ext. citations	4.8 avg, IF	7.02 L-index

#	Paper	IF	Citations
257	Mathematical models of neuronal growth.. *Biomechanics and Modeling in Mechanobiology*, **2022**, 21, 89	3.8	0
256	Centrioles generate a local pulse of Polo/PLK1 activity to initiate mitotic centrosome assembly.. *EMBO Journal*, **2022**, e110891	13	0
255	Active filaments I: Curvature and torsion generation. *Journal of the Mechanics and Physics of Solids*, **2022**, 104918	5	1
254	Braiding Braak and Braak: Staging patterns and model selection in network neurodegeneration.. *Network Neuroscience*, **2021**, 5, 929-956	5.6	0
253	Predicting brain atrophy from tau pathology: a summary of clinical findings and their translation into personalized models. *Brain Multiphysics*, **2021**, 2, 100039	4.2	2
252	The role of clearance mechanisms in the kinetics of pathological protein aggregation involved in neurodegenerative diseases. *Journal of Chemical Physics*, **2021**, 154, 125101	3.9	3
251	Theory for Durotactic Axon Guidance. *Physical Review Letters*, **2021**, 126, 118101	7.4	5
250	Liquid crystal elastomers wrinkling. *Nonlinearity*, **2021**, 34, 5599-5629	1.7	6
249	Necking, beading, and bulging in soft elastic cylinders. *Journal of the Mechanics and Physics of Solids*, **2021**, 147, 104250	5	17
248	Global and local mobility as a barometer for COVID-19 dynamics. *Biomechanics and Modeling in Mechanobiology*, **2021**, 20, 651-669	3.8	24
247	The mathematical foundations of anelasticity: existence of smooth global intermediate configurations. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2021**, 477, 20200462	2.4	7
246	A Morphoelastic Shell Model of the Eye. *Journal of Elasticity*, **2021**, 145, 5-29	1.5	0
245	Effects of B.1.1.7 and B.1.351 on COVID-19 Dynamics: A Campus Reopening Study. *Archives of Computational Methods in Engineering*, **2021**, 28, 1-12	7.8	1
244	Ligand-Assisted Growth of Nanowires from Solution. *Applied Sciences (Switzerland)*, **2021**, 11, 7641	2.6	
243	Nematic liquid crystalline elastomers are aeolotropic materials.. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2021**, 477, 20210259	2.4	5
242	Universal deformations in anisotropic nonlinear elastic solids. *Journal of the Mechanics and Physics of Solids*, **2021**, 156, 104598	5	3
241	Applied Mathematics in the Time of Corona: A Survival Guide. *Mathematics Online First Collections*, **2020**, 1	0.1	

240	Folding drives cortical thickness variations. *European Physical Journal: Special Topics*, **2020**, 229, 2757-2778	2.3	3
239	A pseudo-anelastic model for stress softening in liquid crystal elastomers. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2020**, 476, 20200558	2.4	6
238	Likely cavitation and radial motion of stochastic elastic spheres. *Nonlinearity*, **2020**, 33, 1987-2034	1.7	6
237	Likely striping in stochastic nematic elastomers. *Mathematics and Mechanics of Solids*, **2020**, 25, 1851-1872	2.3	11
236	Dynamic Buckling of an Elastic Ring in a Soap Film. *Physical Review Letters*, **2020**, 124, 198003	7.4	11
235	Dynamic buckling of an inextensible elastic ring: Linear and nonlinear analyses. *Physical Review E*, **2020**, 101, 053002	2.4	6
234	Revisiting the wrinkling of elastic bilayers II: Post-bifurcation analysis. *Journal of the Mechanics and Physics of Solids*, **2020**, 143, 104053	5	5
233	An Autonomous Oscillation Times and Executes Centriole Biogenesis. *Cell*, **2020**, 181, 1566-1581.e27	56.2	10
232	Topological features dictate the mechanics of the mammalian brains. *International Journal of Mechanical Sciences*, **2020**, 187, 105914	5.5	2
231	Mechanics of human brain organoids. *Physical Review E*, **2020**, 101, 022403	2.4	9
230	The role of topology and mechanics in uniaxially growing cell networks. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2020**, 476, 20190523	2.4	2
229	Morphoelastic rods III: Differential growth and curvature generation in elastic filaments. *Journal of the Mechanics and Physics of Solids*, **2020**, 142, 104022	5	12
228	Global and local mobility as a barometer for COVID-19 dynamics **2020**,		12
227	Is it safe to lift COVID-19 travel bans? The Newfoundland story **2020**,		4
226	Universal displacements in linear elasticity. *Journal of the Mechanics and Physics of Solids*, **2020**, 135, 103782	5	4
225	Building a carnivorous trap. *Science*, **2020**, 367, 24-25	33.3	
224	Spatially-extended nucleation-aggregation-fragmentation models for the dynamics of prion-like neurodegenerative protein-spreading in the brain and its connectome. *Journal of Theoretical Biology*, **2020**, 486, 110102	2.3	20
223	Mechanics unlocks the morphogenetic puzzle of interlocking bivalved shells. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 43-51	11.5	3

222	Anisotropic diffusion and traveling waves of toxic proteins in neurodegenerative diseases. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2020**, 384, 126935	2.3	3
221	Protein-protein interactions in neurodegenerative diseases: A conspiracy theory. *PLoS Computational Biology*, **2020**, 16, e1008267	5	14
220	Competitive Nucleation Mechanism for CsPbBr Perovskite Nanoplatelet Growth. *Journal of Physical Chemistry Letters*, **2020**, 11, 6535-6543	6.4	20
219	Multiscale integration of environmental stimuli in plant tropism produces complex behaviors. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 32226-32237	11.5	15
218	Elastocytosis. *Journal of the Mechanics and Physics of Solids*, **2020**, 145, 104133	5	6
217	Interactions of Anisotropic Inclusions on a Fluid Membrane. *SIAM Journal on Applied Mathematics*, **2020**, 80, 2448-2471	1.8	0
216	A plate theory for nematic liquid crystalline solids. *Journal of the Mechanics and Physics of Solids*, **2020**, 144, 104101	5	14
215	The Anelastic Ericksen Problem: Universal Deformations and Universal Eigenstrains in Incompressible Nonlinear Anelasticity. *Journal of Elasticity*, **2020**, 142, 291-381	1.5	5
214	Is it safe to lift COVID-19 travel bans? The Newfoundland story. *Computational Mechanics*, **2020**, 66, 1-12	4	40
213	Neuronal Oscillations on Evolving Networks: Dynamics, Damage, Degradation, Decline, Dementia, and Death. *Physical Review Letters*, **2020**, 125, 128102	7.4	8
212	Reverse Coarsening and the Control of Particle Size Distribution through Surfactant. *Applied Sciences (Switzerland)*, **2020**, 10, 5359	2.6	5
211	Likely oscillatory motions of stochastic hyperelastic solids **2019**, 3,		6
210	On the figure of elastic planets I: gravitational collapse and infinitely many equilibria. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2019**, 475, 20180815	2.4	0
209	Likely chirality of stochastic anisotropic hyperelastic tubes. *International Journal of Non-Linear Mechanics*, **2019**, 114, 9-20	2.8	10
208	Revisiting the wrinkling of elastic bilayers í: linear analysis. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2019**, 377, 20180076	3	18
207	Likely equilibria of the stochastic Rivlin cube. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2019**, 377, 20180068	3	14
206	Growth and remodelling of living tissues: perspectives, challenges and opportunities. *Journal of the Royal Society Interface*, **2019**, 16, 20190233	4.1	70
205	A computational framework for the morpho-elastic development of molluskan shells by surface and volume growth. *PLoS Computational Biology*, **2019**, 15, e1007213	5	4

204	Prion-like spreading of Alzheimer's disease within the brain's connectome. *Journal of the Royal Society Interface*, **2019**, 16, 20190356	4.1	33
203	Likely equilibria of stochastic hyperelastic spherical shells and tubes. *Mathematics and Mechanics of Solids*, **2019**, 24, 2066-2082	2.3	11
202	Likely Cavitation in Stochastic Elasticity. *Journal of Elasticity*, **2019**, 137, 27-42	1.5	12
201	A physics-based model explains the prion-like features of neurodegeneration in Alzheimer's disease, Parkinson's disease, and amyotrophic lateral sclerosis. *Journal of the Mechanics and Physics of Solids*, **2019**, 124, 264-281	5	45
200	Are Homeostatic States Stable? Dynamical Stability in Morphoelasticity. *Bulletin of Mathematical Biology*, **2019**, 81, 3219-3244	2.1	10
199	Controllable rotational inversion in nanostructures with dual chirality. *Nanoscale*, **2018**, 10, 6343-6348	7.7	7
198	Imaging Localized Energy States in Silicon-Doped InGaN Nanowires Using 4D Electron Microscopy. *ACS Energy Letters*, **2018**, 3, 476-481	20.1	11
197	MECHANICAL FEEDBACK IN SEASHELL GROWTH AND FORM. *ANZIAM Journal*, **2018**, 59, 581-606	0.5	2
196	Stochastic isotropic hyperelastic materials: constitutive calibration and model selection. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2018**, 474, 20170858	2.4	27
195	Five ways to model active processes in elastic solids: Active forces, active stresses, active strains, active fibers, and active metrics. *Mechanics Research Communications*, **2018**, 93, 75-79	2.2	9
194	Edge effects in elastic bulging. *International Journal of Non-Linear Mechanics*, **2018**, 106, 227-237	2.8	2
193	Axonal Buckling Following Stretch Injury **2018**, 239-256		1
192	Bulging Brains **2018**, 197-212		2
191	Symmetry Breaking in Wrinkling Patterns: Gyri Are Universally Thicker than Sulci. *Physical Review Letters*, **2018**, 121, 228002	7.4	25
190	Curvature delays growth-induced wrinkling. *Physical Review E*, **2018**, 98,	2.4	23
189	Asymmetric equilibria of two nested elastic rings. *Mechanics Research Communications*, **2018**, 94, 91-94	2.2	3
188	Multiphysics of Prionlike Diseases: Progression and Atrophy. *Physical Review Letters*, **2018**, 121, 158101	7.4	43
187	Morphoelastic rods Part II: Growing birods. *Journal of the Mechanics and Physics of Solids*, **2017**, 100, 147-196	5	14

186	Self-assembly of a filament by curvature-inducing proteins. *Physica D: Nonlinear Phenomena*, **2017**, 344, 68-80	3.3	1
185	Double Charged Surface Layers in Lead Halide Perovskite Crystals. *Nano Letters*, **2017**, 17, 2021-2027	11.5	52
184	Trapping shape-controlled nanoparticle nucleation and growth stages via continuous-flow chemistry. *Chemical Communications*, **2017**, 53, 2495-2498	5.8	16
183	Microstructure-based hyperelastic models for closed-cell solids. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2017**, 473, 20170036	2.4	5
182	A family of hyperelastic models for human brain tissue. *Journal of the Mechanics and Physics of Solids*, **2017**, 106, 60-79	5	83
181	Temperature-Induced Lattice Relaxation of Perovskite Crystal Enhances Optoelectronic Properties and Solar Cell Performance. *Journal of Physical Chemistry Letters*, **2017**, 8, 137-143	6.4	32
180	A Microstructure-Based Hyperelastic Model for Open-Cell Solids. *SIAM Journal on Applied Mathematics*, **2017**, 77, 1397-1416	1.8	7
179	Mathematical modelling of blood-brain barrier failure and oedema. *Mathematical Medicine and Biology*, **2017**, 34, 391-414	1.3	5
178	Random blebbing motion: A simple model linking cell structural properties to migration characteristics. *Physical Review E*, **2017**, 96, 012409	2.4	5
177	Axonal Buckling Following Stretch Injury. *Journal of Elasticity*, **2017**, 129, 239-256	1.5	4
176	A tale of two nested elastic rings. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2017**, 473, 20170340	2.4	11
175	Thermodynamic limit for particle monodispersity: How narrow can a particle size distribution be?. *Europhysics Letters*, **2017**, 119, 50001	1.6	4
174	The Role of Surface Tension in the Crystallization of Metal Halide Perovskites. *ACS Energy Letters*, **2017**, 2, 1782-1788	20.1	103
173	Dimensional, Geometrical, and Physical Constraints in Skull Growth. *Physical Review Letters*, **2017**, 118, 248101	7.4	19
172	Bulging brains. *Journal of Elasticity*, **2017**, 129, 197-212	1.5	20
171	Continuum mechanical modeling of axonal growth. *Computer Methods in Applied Mechanics and Engineering*, **2017**, 314, 147-163	5.7	12
170	The mechanics of decompressive craniectomy: Personalized simulations. *Computer Methods in Applied Mechanics and Engineering*, **2017**, 314, 180-195	5.7	28
169	How to characterize a nonlinear elastic material? A review on nonlinear constitutive parameters in isotropic finite elasticity. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2017**, 473, 20170607	2.4	85

168	Geometric conditions for the positive definiteness of the second variation in one-dimensional problems. *Nonlinearity*, **2017**, 30, 2023-2062	1.7	1
167	The Mathematics and Mechanics of Biological Growth. *Interdisciplinary Applied Mathematics*, **2017**,	0.7	173
166	The mechanics of decompressive craniectomy: Bulging in idealized geometries. *Journal of the Mechanics and Physics of Solids*, **2016**, 96, 572-590	5	6
165	Guaranteed Upper and Lower Bounds on the Uniform Load of Contact Problems in Elasticity. *SIAM Journal on Applied Mathematics*, **2016**, 76, 1558-1576	1.8	2
164	A Geometric Theory of Nonlinear Morphoelastic Shells. *Journal of Nonlinear Science*, **2016**, 26, 929-978	2.8	19
163	Growth, collapse, and stalling in a mechanical model for neurite motility. *Physical Review E*, **2016**, 93, 032410	2.4	24
162	Pure crystal orientation and anisotropic charge transport in large-area hybrid perovskite films. *Nature Communications*, **2016**, 7, 13407	17.4	140
161	Design and Stability of a Family of Deployable Structures. *SIAM Journal on Applied Mathematics*, **2016**, 76, 1920-1941	1.8	5
160	Real-Space Visualization of Energy Loss and Carrier Diffusion in a Semiconductor Nanowire Array Using 4D Electron Microscopy. *Advanced Materials*, **2016**, 28, 5106-11	24	23
159	Morphomechanical Innovation Drives Explosive Seed Dispersal. *Cell*, **2016**, 166, 222-33	56.2	86
158	The surprising dynamics of a chain on a pulley: lift off and snapping. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2016**, 472, 20160187	2.4	6
157	Quantum capacitance modifies interionic interactions in semiconducting nanopores. *Europhysics Letters*, **2016**, 113, 38005	1.6	3
156	Wrinkling, creasing, and folding in fiber-reinforced soft tissues. *Extreme Mechanics Letters*, **2016**, 8, 22-29	3.9	13
155	Solution-Grown Monocrystalline Hybrid Perovskite Films for Hole-Transporter-Free Solar Cells. *Advanced Materials*, **2016**, 28, 3383-90	24	238
154	Morphomechanics and Developmental Constraints in the Evolution of Ammonites Shell Form. *Journal of Experimental Zoology Part B: Molecular and Developmental Evolution*, **2016**, 326, 437-450	1.8	13
153	The anelastic Ericksen problem: universal eigenstrains and deformations in compressible isotropic elastic solids. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2016**, 472, 20160690	2.4	8
152	The elastic secrets of the chameleon tongue. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2016**, 472, 20160030	2.4	12
151	Stress Singularities in Swelling Soft Solids. *Physical Review Letters*, **2016**, 117, 138001	7.4	21

150	Influence of constraints on axial growth reduction of cylindrical Li-ion battery electrode particles. *Journal of Power Sources*, **2015**, 279, 746-758	8.9	10
149	Mechanics of the brain: perspectives, challenges, and opportunities. *Biomechanics and Modeling in Mechanobiology*, **2015**, 14, 931-65	3.8	217
148	A model for effects of adaptive immunity on tumor response to chemotherapy and chemoimmunotherapy. *Journal of Theoretical Biology*, **2015**, 380, 569-84	2.3	14
147	Global contraction or local growth, bleb shape depends on more than just cell structure. *Journal of Theoretical Biology*, **2015**, 380, 83-97	2.3	14
146	High-quality bulk hybrid perovskite single crystals within minutes by inverse temperature crystallization. *Nature Communications*, **2015**, 6, 7586	17.4	1164
145	Size and curvature regulate pattern selection in the mammalian brain. *Extreme Mechanics Letters*, **2015**, 4, 193-198	3.9	38
144	Propagation of damage in brain tissue: coupling the mechanics of oedema and oxygen delivery. *Biomechanics and Modeling in Mechanobiology*, **2015**, 14, 1197-216	3.8	12
143	Non-metricity and the Nonlinear Mechanics of Distributed Point Defects. *Springer Proceedings in Mathematics and Statistics*, **2015**, 235-251	0.2	1
142	A comparison of hyperelastic constitutive models applicable to brain and fat tissues. *Journal of the Royal Society Interface*, **2015**, 12, 0486	4.1	109
141	On the modeling of fiber dispersion in fiber-reinforced elastic materials. *International Journal of Non-Linear Mechanics*, **2015**, 75, 92-106	2.8	30
140	Are Room-Temperature Ionic Liquids Dilute Electrolytes?. *Journal of Physical Chemistry Letters*, **2015**, 6, 159-63	6.4	101
139	Combining mechanical and chemical effects in the deformation and failure of a cylindrical electrode particle in a Li-ion battery. *International Journal of Solids and Structures*, **2015**, 54, 66-81	3.1	45
138	Finite deformation effects in cellular structures with hyperelastic cell walls. *International Journal of Solids and Structures*, **2015**, 53, 107-128	3.1	14
137	The morpho-mechanical basis of ammonite form. *Journal of Theoretical Biology*, **2015**, 364, 220-30	2.3	13
136	The twist-fit problem: finite torsional and shear eigenstrains in nonlinear elastic solids. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2015**, 471, 20150596	2.4	14
135	Membrane shrinkage and cortex remodelling are predicted to work in harmony to retract blebs. *Royal Society Open Science*, **2015**, 2, 150184	3.3	11
134	Plasmonic-Induced Photon Recycling in Metal Halide Perovskite Solar Cells. *Advanced Functional Materials*, **2015**, 25, 5038-5046	15.6	167
133	Reversible Size Control of Silver Nanoclusters via Ligand-Exchange. *Chemistry of Materials*, **2015**, 27, 4289-4297	9.6	82

132	A short introduction to morphoelasticity: the mechanics of growing elastic tissues. *CISM International Centre for Mechanical Sciences, Courses and Lectures*, **2015**, 269-297	0.6	1
131	Paws, pads and plants: the enhanced elasticity of cell-filled load-bearing structures. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2015**, 471, 20150107	2.4	23
130	Neuromechanics. *Advances in Applied Mechanics*, **2015**, 79-139	10	47
129	Dynamics of Ion Transport in Ionic Liquids. *Physical Review Letters*, **2015**, 115, 106101	7.4	44
128	On the stress singularities generated by anisotropic eigenstrains and the hydrostatic stress due to annular inhomogeneities. *Journal of the Mechanics and Physics of Solids*, **2015**, 76, 325-337	5	11
127	Controlled Topological Transitions in Thin-Film Phase Separation. *SIAM Journal on Applied Mathematics*, **2015**, 75, 38-60	1.8	1
126	Is the Donnan effect sufficient to explain swelling in brain tissue slices?. *Journal of the Royal Society Interface*, **2014**, 11, 20140123	4.1	31
125	Neutral color semitransparent microstructured perovskite solar cells. *ACS Nano*, **2014**, 8, 591-8	16.7	365
124	Recombination Kinetics in Organic-Inorganic Perovskites: Excitons, Free Charge, and Subgap States. *Physical Review Applied*, **2014**, 2,	4.3	874
123	Nonlinear Poisson effects in soft honeycombs. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2014**, 470, 20140363	2.4	6
122	Enhanced photoluminescence and solar cell performance via Lewis base passivation of organic-inorganic lead halide perovskites. *ACS Nano*, **2014**, 8, 9815-21	16.7	1194
121	Singular inextensible limit in the vibrations of post-buckled rods: Analytical derivation and role of boundary conditions. *Journal of Sound and Vibration*, **2014**, 333, 962-970	3.9	4
120	Controlling coverage of solution cast materials with unfavourable surface interactions. *Applied Physics Letters*, **2014**, 104, 091602	3.4	33
119	Three mechanical models for blebbing and multi-blebbing. *IMA Journal of Applied Mathematics*, **2014**, 79, 636-660	1	13
118	Propagating topological transformations in thin immiscible bilayer films. *Europhysics Letters*, **2014**, 105, 66001	1.6	4
117	The : from self-buckling to self-assembly. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2014**, 470, 20130609	2.4	38
116	The geometry of discombinations and its applications to semi-inverse problems in anelasticity. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2014**, 470, 20140403	2.4	20
115	Cellular blebs: pressure-driven, axisymmetric, membrane protrusions. *Biomechanics and Modeling in Mechanobiology*, **2014**, 13, 463-76	3.8	18

114	Morphological Control for High Performance, Solution-Processed Planar Heterojunction Perovskite Solar Cells. *Advanced Functional Materials*, **2014**, 24, 151-157	15.6	1639
113	Surface growth kinematics via local curve evolution. *Journal of Mathematical Biology*, **2014**, 68, 81-108	2	12
112	Twist and stretch of helices explained via the Kirchhoff-Love rod model of elastic filaments. *Physical Review Letters*, **2013**, 111, 108103	7.4	20
111	Automated synthesis of photovoltaic-quality colloidal quantum dots using separate nucleation and growth stages. *ACS Nano*, **2013**, 7, 10158-66	16.7	77
110	Nonlinear elastic inclusions in isotropic solids. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2013**, 469, 20130415	2.4	36
109	Growth-induced axial buckling of a slender elastic filament embedded in an isotropic elastic matrix. *International Journal of Non-Linear Mechanics*, **2013**, 56, 94-104	2.8	20
108	Mechanical basis of morphogenesis and convergent evolution of spiny seashells. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 6015-20	11.5	41
107	Numerical simulation of shear and the Poynting effects by the finite element method: An application of the generalised empirical inequalities in non-linear elasticity. *International Journal of Non-Linear Mechanics*, **2013**, 49, 1-14	2.8	36
106	Morphoelastic rods. Part I: A single growing elastic rod. *Journal of the Mechanics and Physics of Solids*, **2013**, 61, 398-427	5	56
105	Riemann‐Cartan geometry of nonlinear disclination mechanics. *Mathematics and Mechanics of Solids*, **2013**, 18, 91-102	2.3	47
104	Static and dynamic stability results for a class of three-dimensional configurations of Kirchhoff elastic rods. *Physica D: Nonlinear Phenomena*, **2013**, 253, 91-101	3.3	4
103	Dynamic fiber reorientation in a fiber-reinforced hyperelastic material. *Mathematics and Mechanics of Solids*, **2013**, 18, 634-648	2.3	22
102	Rotation, inversion and perversion in anisotropic elastic cylindrical tubes and membranes. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2013**, 469, 20130011	2.4	35
101	On the mechanics of thin films and growing surfaces. *Mathematics and Mechanics of Solids*, **2013**, 18, 561-575	2.3	23
100	Light induced modulation instability of surfaces under intense illumination. *Applied Physics Letters*, **2013**, 103, 251604	3.4	
99	The Mechanics of a Chain or Ring of Spherical Magnets. *SIAM Journal on Applied Mathematics*, **2013**, 73, 2029-2054	1.8	16
98	The counterbend phenomenon in flagellar axonemes and cross-linked filament bundles. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 12180-5	11.5	30
97	Non-linear waves in heterogeneous elastic rods via homogenization. *International Journal of Non-Linear Mechanics*, **2012**, 47, 197-205	2.8	1

96	Vibrations of post-buckled rods: The singular inextensible limit. *Journal of Sound and Vibration*, **2012**, 331, 704-720	3.9	37
95	A mathematical model of tumor-immune interactions. *Journal of Theoretical Biology*, **2012**, 294, 56-73	2.3	90
94	Stability Estimates for a Twisted Rod Under Terminal Loads: A Three-dimensional Study. *Journal of Elasticity*, **2012**, 109, 75-93	1.5	12
93	Mechanical growth and morphogenesis of seashells. *Journal of Theoretical Biology*, **2012**, 311, 69-79	2.3	31
92	Synaptic bistability due to nucleation and evaporation of receptor clusters. *Physical Review Letters*, **2012**, 108, 028101	7.4	11
91	Self-diffusion in remodeling and growth. *Zeitschrift Fur Angewandte Mathematik Und Physik*, **2012**, 63, 339-355	1.6	11
90	Riemann⎼Cartan Geometry of Nonlinear Dislocation Mechanics. *Archive for Rational Mechanics and Analysis*, **2012**, 205, 59-118	2.3	101
89	Weyl geometry and the nonlinear mechanics of distributed point defects. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2012**, 468, 3902-3922	2.4	42
88	The Fourier transform of tubular densities. *Journal of Physics A: Mathematical and Theoretical*, **2012**, 45, 225208	2	
87	Nonlinear Correction to the Euler Buckling Formula for Compressed Cylinders with Guided-Guided End Conditions. *Journal of Elasticity*, **2011**, 102, 191-200	1.5	20
86	Anticavitation and Differential Growth in Elastic Shells. *Journal of Elasticity*, **2011**, 102, 117-132	1.5	11
85	Spontaneous rotational inversion in Phycomyces. *Physical Review Letters*, **2011**, 106, 138103	7.4	18
84	Perspectives on biological growth and remodeling. *Journal of the Mechanics and Physics of Solids*, **2011**, 59, 863-883	5	307
83	Circumferential buckling instability of a growing cylindrical tube. *Journal of the Mechanics and Physics of Solids*, **2011**, 59, 525-537	5	102
82	Nonlinear morphoelastic plates I: Genesis of residual stress. *Mathematics and Mechanics of Solids*, **2011**, 16, 812-832	2.3	10
81	Positive or negative Poynting effect? The role of adscititious inequalities in hyperelastic materials. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2011**, 467, 3633-3646	2.4	64
80	Scalar evolution equations for shear waves in incompressible solids: a simple derivation of the Z, ZK, KZK and KP equations. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2011**, 467, 1823-1834	2.4	17
79	Nonlinear morphoelastic plates II: Exodus to buckled states. *Mathematics and Mechanics of Solids*, **2011**, 16, 833-871	2.3	5

78	Possible role of differential growth in airway wall remodeling in asthma. *Journal of Applied Physiology*, **2011**, 110, 1003-12	3.7	42
77	Morphoelasticity: A theory of elastic growth **2011**, 153-176		6
76	On the mechanical stability of growing arteries. *IMA Journal of Applied Mathematics*, **2010**, 75, 549-570	1	45
75	Elastic cavitation, tube hollowing, and differential growth in plants and biological tissues. *Europhysics Letters*, **2010**, 91, 18001	1.6	25
74	Spontaneous Cavitation in Growing Elastic Membranes. *Mathematics and Mechanics of Solids*, **2010**, 15, 57-77	2.3	18
73	The nonlinear dynamics of elastic tubes conveying a fluid. *International Journal of Solids and Structures*, **2010**, 47, 161-168	3.1	11
72	A Morpho-Elastic Model of Hyphal Tip Growth in Filamentous Organisms. *IUTAM Symposium on Cellular, Molecular and Tissue Mechanics*, **2010**, 245-255	0.3	2
71	Differential growth and residual stress in cylindrical elastic structures. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2009**, 367, 3607-30	3	37
70	Morpho-elastodynamics: the long-time dynamics of elastic growth. *Journal of Biological Dynamics*, **2009**, 3, 180-95	2.4	11
69	The Fourier transforms of curves and filaments and their application to low-resolution protein crystallography. *Journal of Applied Crystallography*, **2009**, 42, 268-278	3.8	2
68	Compact waves on planar elastic rods. *International Journal of Non-Linear Mechanics*, **2009**, 44, 538-544	2.8	7
67	Polyhelices through n points. *International Journal of Bioinformatics Research and Applications*, **2009**, 5, 118-32	0.9	5
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