Michel Destrade

List of Publications by Year in descending order

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110317 94381 5,222 156 37 64 citations h-index g-index papers 161 161 161 3331 docs citations times ranked citing authors

#	Article	IF	Citations
1	Nonlinear Vibration and Stability of a Dielectric Elastomer Balloon Based on a Strain-Stiffening Model. Journal of Elasticity, 2023, 153, 533-548.	0.9	6
2	Proton Resonance Frequency Shift Thermometry: A Review of Modern Clinical Practices. Journal of Magnetic Resonance Imaging, 2022, 55, 389-403.	1.9	24
3	The Generalised Mooney Space for Modelling the Response of Rubber-Like Materials. Journal of Elasticity, 2022, 151, 127-141.	0.9	6
4	Plane-polarised finite-amplitude shear waves in deformed incompressible materials. Mathematics and Mechanics of Solids, 2022, 27, 1494-1503.	1.5	3
5	On the thermodynamic consistency of Quasi-linear viscoelastic models for soft solids. Mechanics Research Communications, 2021, 111, 103648.	1.0	15
6	Wrinkling of soft magneto-active plates. International Journal of Solids and Structures, 2021, 208-209, 13-30.	1.3	6
7	Bending control and stability of functionally graded dielectric elastomers. Extreme Mechanics Letters, 2021, 43, 101162.	2.0	4
8	Acousto-elasticity of transversely isotropic incompressible soft tissues: characterization of skeletal striated muscle. Physics in Medicine and Biology, 2021, 66, 145009.	1.6	18
9	A hyperbolic framework for shear sound beams in nonlinear solids. Communications in Nonlinear Science and Numerical Simulation, 2021, 103, 106036.	1.7	2
10	Pattern evolution in bending dielectric-elastomeric bilayers. Journal of the Mechanics and Physics of Solids, 2020, 136, 103670.	2.3	18
11	The Poynting effect. American Journal of Physics, 2020, 88, 1036-1040.	0.3	5
12	The effect of an exterior electric field on the instability of dielectric plates. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20200267.	1.0	7
13	Nonlinear response and axisymmetric wave propagation in functionally graded soft electro-active tubes. International Journal of Mechanical Sciences, 2020, 187, 106006.	3.6	19
14	Actively controllable topological phase transition in phononic beam systems. International Journal of Mechanical Sciences, 2020, 180, 105668.	3.6	42
15	Electrostatically tunable axisymmetric vibrations of soft electro-active tubes. Journal of Sound and Vibration, 2020, 483, 115467.	2.1	21
16	Electro-mechanically guided growth and patterns. Journal of the Mechanics and Physics of Solids, 2020, 143, 104073.	2.3	9
17	Mechanics of human brain organoids. Physical Review E, 2020, 101, 022403.	0.8	17
18	Stability analysis of charge-controlled soft dielectric plates. International Journal of Engineering Science, 2020, 151, 103280.	2.7	7

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19	Electro-elastic Lamb waves in dielectric plates. Extreme Mechanics Letters, 2020, 39, 100782.	2.0	4
20	An ultrasonic method to measure stress without calibration: The angled shear wave method. Journal of the Acoustical Society of America, 2020, 148, 3963-3970.	0.5	9
21	Multi-sector approximation method for arteries: the residual stresses of circumferential rings with non-trivial openings. Journal of the Royal Society Interface, 2019, 16, 20190023.	1.5	9
22	Influence of Initial Residual Stress on Growth and Pattern Creation for a Layered Aorta. Scientific Reports, 2019, 9, 8232.	1.6	29
23	Poynting effect of brain matter in torsion. Soft Matter, 2019, 15, 5147-5153.	1.2	32
24	Experimental assessment of clinical MRI-induced global SAR distributions in head phantoms. Physica Medica, 2019, 66, 113-118.	0.4	5
25	Generalization of the Zabolotskaya equation to all incompressible isotropic elastic solids. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2019, 475, 20190061.	1.0	8
26	Tension Lines of the Skin. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2019, , 265-280.	0.7	1
27	Rivlin's legacy in continuum mechanics and applied mathematics. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20190090.	1.6	6
28	Tuning the pull-in instability of soft dielectric elastomers through loading protocols. International Journal of Non-Linear Mechanics, 2019, 113, 62-66.	1.4	26
29	Prescribing patterns in growing tubular soft matter by initial residual stress. Soft Matter, 2019, 15, 8468-8474.	1.2	29
30	Head-to-nerve analysis of electromechanical impairments of diffuse axonal injury. Biomechanics and Modeling in Mechanobiology, 2019, 18, 361-374.	1.4	4
31	Finite bending and pattern evolution of the associated instability for a dielectric elastomer slab. International Journal of Solids and Structures, 2019, 158, 191-209.	1.3	29
32	Wrinkles and creases in the bending, unbending and eversion of soft sectors. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20170827.	1.0	17
33	Electroâ€mechanical response of a 3D nerve bundle model to mechanical loads leading to axonal injury. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e2942.	1.0	9
34	Electrothermal Equivalent Three-Dimensional Finite-Element Model of a Single Neuron. IEEE Transactions on Biomedical Engineering, 2018, 65, 1373-1381.	2.5	14
35	Fine tuning the electro-mechanical response of dielectric elastomers. Applied Physics Letters, 2018, 113,	1.5	14
36	Modified multiplicative decomposition model for tissue growth: Beyond the initial stress-free state. Journal of the Mechanics and Physics of Solids, 2018, 118, 133-151.	2.3	40

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37	Wrinkles in soft dielectric plates. Journal of the Mechanics and Physics of Solids, 2018, 119, 298-318.	2.3	58
38	Effects of nerve bundle geometry on neurotrauma evaluation. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e3118.	1.0	5
39	Guided waves in pre-stressed hyperelastic plates and tubes: Application to the ultrasound elastography of thin-walled soft materials. Journal of the Mechanics and Physics of Solids, 2017, 102, 67-79.	2.3	40
40	Catastrophic Thinning of Dielectric Elastomers. Physical Review Letters, 2017, 118, 078001.	2.9	73
41	Methodical fitting for mathematical models of rubber-like materials. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20160811.	1.0	95
42	Wrinkles in the opening angle method. International Journal of Solids and Structures, 2017, 122-123, 189-195.	1.3	6
43	Oblique wrinkles. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160158.	1.6	6
44	Effects of nerve bundle geometry on neurotrauma evaluation., 2017,,.		0
45	Nonâ€invasive evaluation of skin tension lines with elastic waves. Skin Research and Technology, 2017, 23, 326-335.	0.8	24
46	Electro-mechanical response of a 3D nerve bundle model to mechanical loads leading to axonal injury. , 2017, 2017, 978-981.		2
47	Neurotrauma evaluation in a 3D electro-mechanical model of a nerve bundle. , 2017, , .		4
48	Notice of Removal: Guided wave elastography of press-stressed thin-walled soft tissues. , 2017, , .		0
49	On residual stresses and homeostasis: an elastic theory of functional adaptation in living matter. Scientific Reports, 2016, 6, 24390.	1.6	33
50	Edge wrinkling in elastically supported pre-stressed incompressible isotropic plates. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20160410.	1.0	16
51	Strain energy function for isotropic non-linear elastic incompressible solids with linear finite strain response in shear and torsion. Extreme Mechanics Letters, 2016, 9, 204-206.	2.0	27
52	Elastic Cherenkov effects in transversely isotropic soft materials-I: Theoretical analysis, simulations and inverse method. Journal of the Mechanics and Physics of Solids, 2016, 96, 388-410.	2.3	19
53	Morphology of residually stressed tubular tissues: Beyond the elastic multiplicative decomposition. Journal of the Mechanics and Physics of Solids, 2016, 90, 242-253.	2.3	47
54	Toward a Predictive Assessment of Stab-Penetration Forces. American Journal of Forensic Medicine and Pathology, 2015, 36, 162-166.	0.4	10

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55	Incremental Equations for Soft Fibrous Materials. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2015, , 233-267.	0.3	2
56	Dominant negative Poynting effect in simple shearing of soft tissues. Journal of Engineering Mathematics, 2015, 95, 87-98.	0.6	38
57	Measuring the linear and nonlinear elastic properties of brain tissue with shear waves and inverse analysis. Biomechanics and Modeling in Mechanobiology, 2015, 14, 1119-1128.	1.4	55
58	Ray W Ogden: An Appreciation. Mathematics and Mechanics of Solids, 2015, 20, 621-624.	1.5	4
59	Extreme softness of brain matter in simple shear. International Journal of Non-Linear Mechanics, 2015, 75, 54-58.	1.4	72
60	Initial stress symmetry and its applications in elasticity. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20150448.	1.0	29
61	Gent models for the inflation of spherical balloons. International Journal of Non-Linear Mechanics, 2015, 68, 52-58.	1.4	63
62	Straightening: existence, uniqueness and stability. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2014, 470, 20130709.	1.0	16
63	Torsion instability of soft solid cylinders. IMA Journal of Applied Mathematics, 2014, 79, 804-819.	0.8	28
64	Straightening wrinkles. Journal of the Mechanics and Physics of Solids, 2014, 65, 1-11.	2.3	18
65	A robust anisotropic hyperelastic formulation for the modelling of soft tissue. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 39, 48-60.	1.5	162
66	Mechanical characterization of brain tissue in tension at dynamic strain rates. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 33, 43-54.	1.5	187
67	On anisotropic elasticity and questions concerning its Finite Element implementation. Computational Mechanics, 2013, 52, 1185-1197.	2.2	45
68	At least three invariants are necessary to model the mechanical response of incompressible, transversely isotropic materials. Computational Mechanics, 2013, 52, 959-969.	2.2	55
69	Mechanical characterization of brain tissue in simple shear at dynamic strain rates. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 28, 71-85.	1.5	151
70	A combined experimental and numerical study of stab-penetration forces. Forensic Science International, 2013, 233, 7-13.	1.3	34
71	On stress-dependent elastic moduli and wave speeds. IMA Journal of Applied Mathematics, 2013, 78, 965-997.	0.8	38
72	Deficiencies in numerical models of anisotropic nonlinearly elastic materials. Biomechanics and Modeling in Mechanobiology, 2013, 12, 781-791.	1.4	35

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73	Influence of preservation temperature on the measured mechanical properties of brain tissue. Journal of Biomechanics, 2013, 46, 1276-1281.	0.9	37
74	Counter-intuitive results in acousto-elasticity. Wave Motion, 2013, 50, 1218-1228.	1.0	5
75	Proper formulation of viscous dissipation for nonlinear waves in solids. Journal of the Acoustical Society of America, 2013, 133, 1255-1259.	0.5	22
76	Shear instability in skin tissue. Quarterly Journal of Mechanics and Applied Mathematics, 2013, 66, 273-288.	0.5	13
77	A high rate tension device for characterizing brain tissue. Proceedings of the Institution of Mechanical Engineers, Part P: Journal of Sports Engineering and Technology, 2012, 226, 170-176.	0.4	3
78	Hyperelastic and Viscoelastic Properties of Brain Tissue in Tension. , 2012, , .		9
79	Inhomogeneous deformation of brain tissue during tension tests. Computational Materials Science, 2012, 64, 295-300.	1.4	38
80	Temperature effects on brain tissue in compression. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 14, 113-118.	1.5	28
81	Determination of friction coefficient in unconfined compression of brain tissue. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 14, 163-171.	1.5	27
82	Automated Estimation of Collagen Fibre Dispersion in the Dermis and its Contribution to the Anisotropic Behaviour of Skin. Annals of Biomedical Engineering, 2012, 40, 1666-1678.	1.3	159
83	Simple shear is not so simple. International Journal of Non-Linear Mechanics, 2012, 47, 210-214.	1.4	83
84	Uniform transmural strain in pre-stressed arteries occurs at physiological pressure. Journal of Theoretical Biology, 2012, 303, 93-97.	0.8	23
85	Characterization of the anisotropic mechanical properties of excised human skin. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 5, 139-148.	1.5	529
86	Mechanical characterization of brain tissue in compression at dynamic strain rates. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 10, 23-38.	1.5	257
87	Large acoustoelastic effect. Wave Motion, 2012, 49, 364-374.	1.0	46
88	Slight compressibility and sensitivity to changes in Poisson's ratio. International Journal for Numerical Methods in Engineering, 2012, 90, 403-411.	1.5	26
89	Initial stresses in elastic solids: Constitutive laws and acoustoelasticity. Wave Motion, 2011, 48, 552-567.	1.0	129
90	Nonlinear Correction to the Euler Buckling Formula forÂCompressed Cylinders withÂGuided-Guided End Conditions. Journal of Elasticity, 2011, 102, 191-200.	0.9	22

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91	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.	1.0	17
92	COMPRESSION INSTABILITIES OF TISSUES WITH LOCALIZED STRAIN SOFTENING. International Journal of Applied Mechanics, 2011, 03, 69-83.	1.3	6
93	Bimodular rubber buckles early in bending. Mechanics of Materials, 2010, 42, 469-476.	1.7	39
94	On deforming a sector of a circular cylindrical tube into an intact tube: Existence, uniqueness, and stability. International Journal of Engineering Science, 2010, 48, 1212-1224.	2.7	25
95	On the rectilinear shear of compressible and incompressible elastic slabs. International Journal of Engineering Science, 2010, 48, 1202-1211.	2.7	15
96	Special issue in honor of K.R. Rajagopal. International Journal of Engineering Science, 2010, 48, 943-944.	2.7	0
97	Third- and fourth-order constants of incompressible soft solids and the acousto-elastic effect. Journal of the Acoustical Society of America, 2010, 127, 2759-2763.	0.5	58
98	Introduction to special issue on stability under finite deformation. IMA Journal of Applied Mathematics, 2010, 75, 475-478.	0.8	0
99	On the third- and fourth-order constants of incompressible isotropic elasticity. Journal of the Acoustical Society of America, 2010, 128, 3334-3343.	0.5	86
100	Third- and fourth-order elasticities of biological soft tissues. Journal of the Acoustical Society of America, 2010, 127, 2103-2106.	0.5	49
101	Onset of Nonlinearity in the Elastic Bending of Blocks. Journal of Applied Mechanics, Transactions ASME, 2010, 77, .	1.1	46
102	Mechanical Properties of Excised Human Skin. IFMBE Proceedings, 2010, , 1000-1003.	0.2	20
103	Compact travelling waves in viscoelastic solids. Europhysics Letters, 2009, 87, 48001.	0.7	22
104	On the ABAQUS FEA Model of Finite Viscoelasticity. Rubber Chemistry and Technology, 2009, 82, 184-193.	0.6	20
105	Small amplitude waves and stability for a pre-stressed viscoelastic solid. Zeitschrift Fur Angewandte Mathematik Und Physik, 2009, 60, 511-528.	0.7	22
106	Surface waves and surface stability for a pre-stretched, unconstrained, non-linearly elastic half-space. International Journal of Non-Linear Mechanics, 2009, 44, 545-551.	1.4	16
107	Introduction to the special issue on waves in non-linear solid mechanics. International Journal of Non-Linear Mechanics, 2009, 44, 445-449.	1.4	4
108	Inhomogeneous shear of orthotropic incompressible non-linearly elastic solids: Singular solutions and biomechanical interpretation. International Journal of Engineering Science, 2009, 47, 1170-1181.	2.7	11

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109	Bending instabilities of soft biological tissues. International Journal of Solids and Structures, 2009, 46, 4322-4330.	1.3	84
110	Incremental Magnetoelastic Deformations, with Application to Surface Instability. Journal of Elasticity, 2008, 90, 19-42.	0.9	59
111	Measuring knife stab penetration into skin simulant using a novel biaxial tension device. Forensic Science International, 2008, 177, 52-65.	1.3	70
112	Nonlinear transverse waves in deformed dispersive solids. Wave Motion, 2008, 45, 325-336.	1.0	30
113	Nonlinear Euler buckling. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2008, 464, 3003-3019.	1.0	67
114	Asymptotic results for bifurcations in pure bending of rubber blocks. Quarterly Journal of Mechanics and Applied Mathematics, 2008, 61, 395-414.	0.5	29
115	Large-amplitude love waves. Quarterly Journal of Mechanics and Applied Mathematics, 2008, 61, 353-371.	0.5	10
116	Surface Instability of Sheared Soft Tissues. Journal of Biomechanical Engineering, 2008, 130, 061007.	0.6	35
117	Piezoacoustic wave spectra using improved surface impedance matrix: Application to high impedance-contrast layered plates. Journal of the Acoustical Society of America, 2008, 123, 1972-1982.	0.5	14
118	A Wave Near the Edge of a Circular Disk. The Open Acoustics Journal, 2008, 1, 15-18.	0.1	7
119	ENDOCOM: Abdominal Aortic Aneurysm test bench for in vitro simulation. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 2323-6.	0.5	0
120	Weierstrass's criterion and compact solitary waves. Physical Review E, 2007, 75, 047601.	0.8	29
121	Creep, Recovery, and Waves in a Nonlinear Fiber-Reinforced Viscoelastic Solid. SIAM Journal on Applied Mathematics, 2007, 68, 80-97.	0.8	6
122	Seismic Rayleigh waves on an exponentially graded, orthotropic half-space. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2007, 463, 495-502.	1.0	36
123	The stress field in a pulled cork and some subtle points in the semi-inverse method of nonlinear elasticity. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2007, 463, 2945-2959.	1.0	18
124	Acoustic waves at the interface of a pre-stressed incompressible elastic solid and a viscous fluid. International Journal of Non-Linear Mechanics, 2007, 42, 310-320.	1.4	37
125	Interface Waves in Pre-Stressed Incompressible Solids. , 2007, , 63-102.		0
126	Solitary and compactlike shear waves in the bulk of solids. Physical Review E, 2006, 73, 065604.	0.8	34

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127	Piezoelectric love waves on rotated Y-cut mm2 substrates. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2006, 53, 2132-2139.	1.7	15
128	Bleustein–Gulyaev waves in some functionally graded materials. European Journal of Mechanics, A/Solids, 2006, 25, 695-706.	2.1	78
129	The speed of interfacial waves polarized in a symmetry plane. International Journal of Engineering Science, 2006, 44, 26-36.	2.7	18
130	Instabilities in elastomers and in soft tissues. Quarterly Journal of Mechanics and Applied Mathematics, 2006, 59, 615-630.	0.5	69
131	Wireless communicative stent for follow-up of abdominal aortic aneurysm. , 2006, , .		8
132	Non-principal surface waves in deformed incompressible materials. International Journal of Engineering Science, 2005, 43, 1092-1106.	2.7	18
133	Surface waves in a stretched and sheared incompressible elastic material. International Journal of Non-Linear Mechanics, 2005, 40, 241-253.	1.4	26
134	Inhomogeneous ?longitudinal? plane waves in a deformed elastic material. Journal of Elasticity, 2005, 75, 147-165.	0.9	1
135	Explicit secular equations for piezoacoustic surface waves: Rayleigh modes. Journal of Applied Physics, 2005, 98, 054903.	1.1	7
136	Finite amplitude elastic waves propagating in compressible solids. Physical Review E, 2005, 72, 016620.	0.8	46
137	Stoneley Waves and Interface Stability of Bell Materials in Compression; Comparison with Rubber. Mathematics and Mechanics of Solids, 2005, 10, 227-246.	1.5	2
138	Rayleigh Waves in Anisotropic Crystals Rotating About the Normal to a Symmetry Plane. Journal of Applied Mechanics, Transactions ASME, 2004, 71, 516-520.	1.1	18
139	Explicit secular equations for piezoacoustic surface waves: Shear-horizontal modes. Journal of the Acoustical Society of America, 2004, 116, 3432-3442.	0.5	16
140	On interface waves in misoriented pre-stressed incompressible elastic solids. IMA Journal of Applied Mathematics, 2004, 70, 3-14.	0.8	6
141	Finite-amplitude inhomogeneous waves in Mooney–Rivlin viscoelastic solids. Wave Motion, 2004, 40, 251-262.	1.0	29
142	Surface acoustic waves in rotating orthorhombic crystals. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2004, 460, 653-665.	1.0	45
143	Some results on finite amplitude elastic waves propagating in rotating media. Acta Mechanica, 2004, 173, 19-31.	1.1	22
144	Surface waves in a deformed isotropic hyperelastic material subject to an isotropic internal constraint. Wave Motion, 2004, 40, 347-357.	1.0	35

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145	Explicit secular equation for Scholte waves over a monoclinic crystal. Journal of Sound and Vibration, 2004, 273, 409-414.	2.1	10
146	Rayleigh Waves and Surface Stability for Bell Materials in Compression; Comparison with Rubber. Quarterly Journal of Mechanics and Applied Mathematics, 2003, 56, 593-604.	0.5	5
147	Elastic interface acoustic waves in twinned crystals. International Journal of Solids and Structures, 2003, 40, 7375-7383.	1.3	16
148	Surface waves in deformed Bell materials. International Journal of Non-Linear Mechanics, 2003, 38, 809-814.	1.4	2
149	Rayleigh waves in symmetry planes of crystals: explicit secular equations and some explicit wave speeds. Mechanics of Materials, 2003, 35, 931-939.	1.7	38
150	Small-Amplitude Inhomogeneous Plane Waves in a Deformed Mooney-rivlin Material. Quarterly Journal of Mechanics and Applied Mathematics, 2002, 55, 109-126.	0.5	3
151	Circularly polarized plane waves in a deformed Hadamard material. Wave Motion, 2002, 35, 289-309.	1.0	2
152	The incompressible limit in linear anisotropic elasticity, with applications to surface waves and elastostatics. Journal of the Mechanics and Physics of Solids, 2002, 50, 1453-1468.	2.3	40
153	The explicit secular equation for surface acoustic waves in monoclinic elastic crystals. Journal of the Acoustical Society of America, 2001, 109, 1398-1402.	0.5	62
154	Surface waves in orthotropic incompressible materials. Journal of the Acoustical Society of America, 2001, 110, 837-840.	0.5	43
155	Finite-amplitude inhomogeneous plane waves in a deformed Mooney-Rivlin material. Quarterly Journal of Mechanics and Applied Mathematics, 2000, 53, 343-361.	0.5	8
156	Finite-Amplitude Inhomogeneous Plane Waves of Exponential Type in Incompressible Elastic Materials. Journal of Elasticity, 1999, 55, 163-166.	0.9	1