Kumbakonam R Rajagopal

List of Publications by Year
in descending order

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551 papers	19,913 citations	13098 68 h-index	19747 117 g-index
562 all docs	562 docs citations	562 times ranked	5862 citing authors

#	Article	IF	Citations
1	A CONSTRAINED MIXTURE MODEL FOR GROWTH AND REMODELING OF SOFT TISSUES. Mathematical Models and Methods in Applied Sciences, 2002, 12, 407-430.	3.3	619
2	Fluids of differential type: Critical review and thermodynamic analysis. International Journal of Engineering Science, 1995, 33, 689-729.	5.0	504
3	Flow of a viscoelastic fluid over a stretching sheet. Rheologica Acta, 1984, 23, 213-215.	2.4	450
4	A thermodynamic frame work for rate type fluid models. Journal of Non-Newtonian Fluid Mechanics, 2000, 88, 207-227.	2.4	395
5	Mathematical modeling of electrorheological materials. Continuum Mechanics and Thermodynamics, 2001, 13, 59-78.	2.2	353
6	On Implicit Constitutive Theories. Applications of Mathematics, 2003, 48, 279-319.	0.9	353
7	Anomalous features in the model of â€œsecond order fluidsâ€• Archive for Rational Mechanics and Analysis, 1979, 70, 145-152.	2.4	292
8	A note on unsteady unidirectional flows of a non-Newtonian fluid. International Journal of Non-Linear Mechanics, 1982, 17, 369-373.	2.6	263
9	An exact solution for the flow of a non-newtonian fluid past an infinite porous plate. Meccanica, 1984, 19, 158-160.	2.0	246
10	A Theoretical Model of Enlarging Intracranial Fusiform Aneurysms. Journal of Biomechanical Engineering, 2006, 128, 142-149.	1.3	245
11	Theory of small on large: Potential utility in computations of fluidâ€“solid interactions in arteries. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 3070-3078.	6.6	241
12	Intelligent cruise control systems and traffic flow stability. Transportation Research Part C: Emerging Technologies, 1999, 7, 329-352.	7.6	236
13	ON A HIERARCHY OF APPROXIMATE MODELS FOR FLOWS OF INCOMPRESSIBLE FLUIDS THROUGH POROUS SOLIDS. Mathematical Models and Methods in Applied Sciences, 2007, 17, 215-252.	3.3	228
14	Exact solutions for some simple flows of an Oldroyd-B fluid. Acta Mechanica, 1995, 113, 233-239.	2.1	211
15	Mechanics of the inelastic behavior of materialsâ€”part 1, theoretical underpinnings. International Journal of Plasticity, 1998, 14, 945-967.	8.8	199
16	The elasticity of elasticity. Zeitschrift Fur Angewandte Mathematik Und Physik, 2007, 58, 309-317.	1.4	199
17	ON THE OBERBECK-BOUSSINESQ APPROXIMATION. Mathematical Models and Methods in Applied Sciences, 1996, 06, 1157-1167.	3.3	192
18	A constitutive equation for nonlinear solids which undergo deformation induced microstructural changes. International Journal of Plasticity, 1992, 8, 385-395.	8.8	189

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19	On flows of granular materials. Continuum Mechanics and Thermodynamics, 1994, 6, 81-139.	2.2	174
20	A note on the falkner-skan flows of a non-newtonian fluid. International Journal of Non-Linear Mechanics, 1983, 18, 313-320.	2.6	173
21	Start-up flows of second grade fluids in domains with one finite dimension. International Journal of Non-Linear Mechanics, 1995, 30, 817-839.	2.6	172
22	On implicit constitutive theories for fluids. Journal of Fluid Mechanics, 2006, 550, 243.	3.4	169
23	On the creeping flow of the second-order fluid. Journal of Non-Newtonian Fluid Mechanics, 1984, 15, 239-246.	2.4	167
24	The effect of the slip boundary condition on the flow of fluids in a channel. Acta Mechanica, 1999, 135, 113-126.	2.1	152
25	A thermodynamic framework for the modeling of crystallizable shape memory polymers. International Journal of Engineering Science, 2008, 46, 325-351.	5.0	150
26	A constrained mixture model for arterial adaptations to a sustained step change in blood flow. Biomechanics and Modeling in Mechanobiology, 2003, 2, 109-126.	2.8	148
27	On the response of non-dissipative solids. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2007, 463, 357-367.	2.1	145
28	Review of the uses and modeling of bitumen from ancient to modern times. Applied Mechanics Reviews, 2003, 56, 149-214.	10.1	144
29	On the uniqueness of flow of a Navier-Stokes fluid due to a stretching boundary. Archive for Rational Mechanics and Analysis, 1987, 98, 385-393.	2.4	142
30	Flow of viscoelastic fluids between rotating disks. Theoretical and Computational Fluid Dynamics, 1992, 3, 185-206.	2.2	134
31	The flow of blood in tubes: theory and experiment. Mechanics Research Communications, 1998, 25, 257-262.	1.8	133
32	On thermomechanical restrictions of continua. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2004, 460, 631-651.	2.1	133
33	Mechanics of the inelastic behavior of materials. Part II: inelastic response. International Journal of Plasticity, 1998, 14, 969-995.	8.8	132
34	On a class of non-dissipative materials that are not hyperelastic. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2009, 465, 493-500.	2.1	130
35	On the thermomechanics of materials that have multiple natural configurations Part I: Viscoelasticity and classical plasticity. Zeitschrift Fur Angewandte Mathematik Und Physik, 2004, 55, 861-893.	1.4	128
36	On the modeling of electrorheological materials. Mechanics Research Communications, 1996, 23, 401-407.	1.8	127

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37	A Single Integral Finite Strain Viscoelastic Model of Ligaments and Tendons. Journal of Biomechanical Engineering, 1996, 118, 221-226.	1.3	127
38	Simple flows of fluids with pressureâ€“dependent viscosities. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2001, 457, 1603-1622.	2.1	124
39	On boundary conditions for a certain class of problems in mixture theory. International Journal of Engineering Science, 1986, 24, 1453-1463.	5.0	122
40	A Mathematical Model for Shearâ€Induced Hemolysis. Artificial Organs, 1995, 19, 576-582.	1.9	122
41	A Model Incorporating Some of the Mechanical and Biochemical Factors Underlying Clot Formation and Dissolution in Flowing Blood. Journal of Theoretical Medicine, 2003, 5, 183-218.	0.5	120
42	A Model for the Formation and Lysis of Blood Clots. Pathophysiology of Haemostasis and Thrombosis: International Journal on Haemostasis and Thrombosis Research, 2005, 34, 109-120.	0.3	117
43	EXISTENCE AND REGULARITY OF SOLUTIONS AND THE STABILITY OF THE REST STATE FOR FLUIDS WITH SHEAR DEPENDENT VISCOSITY. Mathematical Models and Methods in Applied Sciences, 1995, 05, 789-812.	3.3	114
44	On the thermomechanics of shape memory wires. Zeitschrift Fur Angewandte Mathematik Und Physik, 1999, 50, 459.	1.4	108
45	A note on the flow induced by a constantly accelerating plate in an Oldroyd-B fluid. Applied Mathematical Modelling, 2007, 31, 647-654.	4.2	108
46	A study of strain-induced crystallization of polymers. International Journal of Solids and Structures, 2001, 38, 1149-1167.	2.7	104
47	On the mechanical behavior of asphalt. Mechanics of Materials, 2005, 37, 1085-1100.	3.2	104
48	A model for the formation, growth, and lysis of clots in quiescent plasma. A comparison between the effects of antithrombin III deficiency and protein C deficiency. Journal of Theoretical Biology, 2008, 253, 725-738.	1.7	98
49	Flow of a non-Newtonian fluid past a wedge. Acta Mechanica, 1991, 88, 113-123.	2.1	97
50	A thermodynamic framework for the study of crystallization in polymers. Zeitschrift Fur Angewandte Mathematik Und Physik, 2002, 53, 365-406.	1.4	97
51	An existence theorem for the flow of a non-newtonian fluid past an infinite porous plate. International Journal of Non-Linear Mechanics, 1986, 21, 279-289.	2.6	90
52	Navier's slip and evolutionary Navier-Stokes-like systems with pressure and shear-rate dependent viscosity. Indiana University Mathematics Journal, 2007, 56, 51-86.	0.9	89
53	Global Analysis of the Flows of Fluids with Pressure-Dependent Viscosities. Archive for Rational Mechanics and Analysis, 2002, 165, 243-269.	2.4	88
54	Flow of a fluidâ€”solid mixture between flat plates. Chemical Engineering Science, 1991, 46, 1713-1723.	3.8	86

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55	Stagnation point flow of a non-newtonian fluid. Mechanics Research Communications, 1990, 17, 415-421.	1.8	84
56	Thermodynamic Framework for the Constitutive Modeling of Asphalt Concrete: Theory and Applications. Journal of Materials in Civil Engineering, 2004, 16, 155-166.	2.9	84
57	On the shear and bending of a degrading polymer beam. International Journal of Plasticity, 2007, 23, 1618-1636.	8.8	81
58	On the inelastic behavior of solids â€" Part 1: Twinning. International Journal of Plasticity, 1995, 11, 653-678.	8.8	79
59	On a class of exact solutions to the equations of motion of a second grade fluid. International Journal of Engineering Science, 1981, 19, 1009-1014.	5.0	76
60	Information Flow and Its Relation to Stability of the Motion of Vehicles in a Rigid Formation. IEEE Transactions on Automatic Control, 2006, 51, 1315-1319.	5.7	76
61	Non-Linear Elastic Bodies Exhibiting Limiting Small Strain. Mathematics and Mechanics of Solids, 2011, 16, 122-139.	2.4	76
62	On the nonlinear elastic response of bodies in the small strain range. Acta Mechanica, 2014, 225, 1545-1553.	2.1	76
63	Uniqueness and drag for fluids of second grade in steady motion. International Journal of Non-Linear Mechanics, 1978, 13, 131-137.	2.6	75
64	Modeling anisotropic fluids within the framework of bodies with multiple natural configurations. Journal of Non-Newtonian Fluid Mechanics, 2001, 99, 109-124.	2.4	74
65	Flow of an Oldroyd-B fluid due to a stretching sheet in the presence of a free stream velocity. International Journal of Non-Linear Mechanics, 1995, 30, 391-405.	2.6	73
66	On the flow of a simple fluid in an orthogonal rheometer. Archive for Rational Mechanics and Analysis, 1982, 79, 39-47.	2.4	69
67	Longitudinal and torsional oscillations of a rod in a non-Newtonian fluid. Acta Mechanica, 1983, 49, 281-285.	2.1	69
68	Mathematical Issues Concerning the Navierâ€"Stokes Equations and Some of Its Generalizations. Handbook of Differential Equations: Evolutionary Equations, 2005, 2, 371-459.	0.9	68
69	Mathematical Analysis of Unsteady Flows of Fluids with Pressure, Shear-Rate, and Temperature Dependent Material Moduli that Slip at Solid Boundaries. SIAM Journal on Mathematical Analysis, 2009, 41, 665-707.	1.9	68
70	Flow of a non-Newtonian fluid between heated parallel plates. International Journal of Non-Linear Mechanics, 1985, 20, 91-101.	2.6	67
71	Swirling flow between rotating plates. Archive for Rational Mechanics and Analysis, 1984, 86, 305-315.	2.4	66
72	Natural convection flow of a non-Newtonian fluid between two vertical flat plates. Acta Mechanica, 1985, 54, 239-246.	2.1	66

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73	Flow of electro-rheological materials. Acta Mechanica, 1992, 91, 57-75.	2.1	66
74	On an inconsistency in the derivation of the equations of elastohydrodynamic lubrication. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2003, 459, 2771-2786.	2.1	66
75	Competition Between Radial Expansion and Thickening in the Enlargement of an Intracranial Saccular Aneurysm. Journal of Elasticity, 2005, 80, 13-31.	1.9	66
76	Modeling fracture in the context of a strain-limiting theory of elasticity: a single anti-plane shear crack. International Journal of Fracture, 2011, 169, 39-48.	2.2	66
77	On the Oberbeckâ€“Boussinesq approximation for fluids with pressure dependent viscosities. Nonlinear Analysis: Real World Applications, 2009, 10, 1139-1150.	1.7	65
78	Modeling the Pneumatic Subsystem of an S-cam Air Brake System. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2004, 126, 36-46.	1.6	64
79	Applications of the theory of interacting continua to the diffusion of a fluid through a non-linear elastic media. International Journal of Engineering Science, 1981, 19, 871-889.	5.0	63
80	A note on the flow of a Burgersâ€™ fluid in an orthogonal rheometer. International Journal of Engineering Science, 2004, 42, 1973-1985.	5.0	63
81	On the thermodynamics of fluids defined by implicit constitutive relations. Zeitschrift Fur Angewandte Mathematik Und Physik, 2008, 59, 715-729.	1.4	63
82	Modeling the response of nonlinear viscoelastic biodegradable polymeric stents. International Journal of Solids and Structures, 2012, 49, 989-1000.	2.7	63
83	On the development and generalizations of Cahnâ€“Hilliard equations within a thermodynamic framework. Zeitschrift Fur Angewandte Mathematik Und Physik, 2012, 63, 145-169.	1.4	62
84	Deformation-induced hydrolysis of a degradable polymeric cylindrical annulus. Biomechanics and Modeling in Mechanobiology, 2010, 9, 177-186.	2.8	61
85	A Gibbs-potential-based formulation for obtaining the response functions for a class of viscoelastic materials. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2011, 467, 39-58.	2.1	60
86	Identification of elastic properties of homogeneous, orthotropic vascular segments in distension. Journal of Biomechanics, 1995, 28, 501-512.	2.1	59
87	A new development and interpretation of the Navierâ€“Stokes fluid which reveals why the â€œStokes assumptionâ€•is inapt. International Journal of Non-Linear Mechanics, 2013, 50, 141-151.	2.6	58
88	Flow of a fluid infused with solid particles through a pipe. International Journal of Engineering Science, 1991, 29, 649-661.	5.0	56
89	A Diagnostic System for Air Brakes in Commercial Vehicles. IEEE Transactions on Intelligent Transportation Systems, 2006, 7, 360-376.	8.0	56
90	Towards an understanding of the mechanics underlying aortic dissection. Biomechanics and Modeling in Mechanobiology, 2007, 6, 345-359.	2.8	56

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91	Diffusion through polymeric solids undergoing large deformations. Materials Science and Technology, 2003, 19, 1175-1180.	1.6	55
92	On the thermomechanics of materials that have multiple natural configurations. Zeitschrift Fur Angewandte Mathematik Und Physik, 2004, 55, 1074-1093.	1.4	55
93	Anti-plane stress state of a plate with a V-notch for a new class of elastic solids. International Journal of Fracture, 2013, 179, 59-73.	2.2	55
94	The flow of a second order fluid between rotating parallel plates. Journal of Non-Newtonian Fluid Mechanics, 1981, 9, 185-190.	2.4	53
95	Inelastic behavior of materials. Part II. Energetics associated with discontinuous deformation twinning. International Journal of Plasticity, 1997, 13, 1-35.	8.8	53
96	Flow and stability of a second grade fluid between two parallel plates rotating about noncoincident axes. International Journal of Engineering Science, 1981, 19, 1401-1409.	5.0	52
97	Asymmetric flow between parallel rotating disks. Journal of Fluid Mechanics, 1984, 146, 203-225.	3.4	52
98	Some nonlinear diffusion problems within the context of the theory of interacting continua. International Journal of Engineering Science, 1987, 25, 1441-1457.	5.0	52
99	Solutions of some simple boundary value problems within the context of a new class of elastic materials. International Journal of Non-Linear Mechanics, 2011, 46, 376-386.	2.6	51
100	Remarks on the modeling of fluidized systems. AICHE Journal, 1992, 38, 471-472.	3.6	49
101	Flows of Incompressible Fluids subject to Navierâ€™s slip on the boundary. Computers and Mathematics With Applications, 2008, 56, 2128-2143.	2.7	49
102	A thermodynamical framework for chemically reacting systems. Zeitschrift Fur Angewandte Mathematik Und Physik, 2011, 62, 331-363.	1.4	49
103	Remarks on the notion of â€œpressureâ€• International Journal of Non-Linear Mechanics, 2015, 71, 165-172.	2.6	49
104	Analysis of Squeeze Film Dampers Operating With Bubbly Lubricants. Journal of Tribology, 2000, 122, 205-210.	1.9	48
105	A Note on Plane Strain and Plane Stress Problems for a New Class of Elastic Bodies. Mathematics and Mechanics of Solids, 2010, 15, 229-238.	2.4	48
106	On steady flows of fluids with pressureâ€“ and shearâ€“dependent viscosities. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2005, 461, 651-670.	2.1	47
107	On the nature of constraints for continua undergoing dissipative processes. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2005, 461, 2785-2795.	2.1	46
108	Biodegradable Stents: Biomechanical Modeling Challenges and Opportunities. Cardiovascular Engineering and Technology, 2010, 1, 52-65.	1.6	46

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109	A thermomechanical framework for modeling the compaction of asphalt mixes. Mechanics of Materials, 2008, 40, 846-864.	3.2	45
110	New universal relations for nonlinear isotropic elastic materials. Journal of Elasticity, 1987, 17, 75-83.	1.9	44
111	Global existence of solutions for flows of fluids with pressure and shear dependent viscosities. Applied Mathematics Letters, 2002, 15, 961-967.	2.7	44
112	Flow of fluids with pressure- and shear-dependent viscosity down an inclined plane. Journal of Fluid Mechanics, 2012, 706, 173-189.	3.4	44
113	A note on a reappraisal and generalization of the Kelvinâ€“Voigt model. Mechanics Research Communications, 2009, 36, 232-235.	1.8	43
114	A numerical study of a plate with a hole for a new class of elastic bodies. Acta Mechanica, 2012, 223, 1971-1981.	2.1	43
115	Modeling fracture in the context of a strain-limiting theory of elasticity: A single plane-strain crack. International Journal of Engineering Science, 2015, 88, 73-82.	5.0	43
116	Lubrication With Binary Mixtures: Liquid-Liquid Emulsion. Journal of Tribology, 1993, 115, 46-55.	1.9	42
117	Triaxial testing and stress relaxation of asphalt concrete. Mechanics of Materials, 2004, 36, 849-864.	3.2	42
118	A continuum model for the creep of single crystal nickel-base superalloys. Acta Materialia, 2005, 53, 669-679.	7.9	42
119	A thermodynamic basis for the derivation of the Darcy, Forchheimer and Brinkman models for flows through porous media and their generalizations. International Journal of Non-Linear Mechanics, 2014, 58, 162-166.	2.6	42
120	Some simple flows of a Johnson-Segalman fluid. Acta Mechanica, 1999, 132, 209-219.	2.1	41
121	Generalizations of the Navierâ€“Stokes fluid from a new perspective. International Journal of Engineering Science, 2010, 48, 1907-1924.	5.0	41
122	A thermomechanical framework for the glass transition phenomenon in certain polymers and its application to fiber spinning. Journal of Rheology, 2002, 46, 977.	2.6	40
123	Numerical simulations and global existence of solutions of two-dimensional flows of fluids with pressure- and shear-dependent viscosities. Mathematics and Computers in Simulation, 2003, 61, 297-315.	4.4	40
124	A note on the linearization of the constitutive relations of non-linear elastic bodies. Mechanics Research Communications, 2018, 93, 132-137.	1.8	40
125	On a boundary layer theory for non-Newtonian fluids. International Journal of Engineering Science, 1980, 18, 875-883.	5.0	39
126	New exact solutions in non-linear elasticity. International Journal of Engineering Science, 1985, 23, 217-234.	5.0	39

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127	Asymmetric flow above a rotating disk. Journal of Fluid Mechanics, 1985, 157, 471-492.	3.4	39
128	Circular shearing and torsion of generalized neo-Hookean materials. IMA Journal of Applied Mathematics, 1992, 48, 23-37.	1.6	39
129	Flow through porous media due to high pressure gradients. Applied Mathematics and Computation, 2008, 199, 748-759.	2.2	39
130	Nonlinear elasticity with limiting small strain for cracks subject to non-penetration. Mathematics and Mechanics of Solids, 2017, 22, 1334-1346.	2.4	39
131	Lubrication With Binary Mixtures: Bubbly Oil. Journal of Tribology, 1993, 115, 253-260.	1.9	37
132	On the fully developed flow of a dense particulate mixture in a pipe. Powder Technology, 1999, 104, 258-268.	4.2	37
133	A review of mathematical models for the flow of traffic and some recent results. Nonlinear Analysis: Theory, Methods & Applications, 2008, 69, 950-970.	1.1	37
134	On Maxwell fluids with relaxation time and viscosity depending on the pressure. International Journal of Non-Linear Mechanics, 2011, 46, 819-827.	2.6	37
135	A new class of quasi-linear models for describing the nonlinear viscoelastic response of materials. Acta Mechanica, 2013, 224, 2169-2183.	2.1	37
136	On constitutive equations for electrorheological materials. Continuum Mechanics and Thermodynamics, 1995, 7, 1-22.	2.2	36
137	Secondary flows due to axial shearing of a third grade fluid between two eccentrically placed cylinders. International Journal of Engineering Science, 1999, 37, 411-429.	5.0	36
138	A numerical study of fluids with pressureâ€dependent viscosity flowing through a rigid porous medium. International Journal for Numerical Methods in Fluids, 2011, 67, 342-368.	1.6	36
139	On a variant of the Maxwell and Oldroyd-B models within the context of a thermodynamic basis. International Journal of Non-Linear Mechanics, 2015, 76, 42-47.	2.6	36
140	On Fully Developed Flows of Fluids with a Pressure Dependent Viscosity in a Pipe. Applications of Mathematics, 2005, 50, 341-353.	0.9	35
141	On Kelvin-Voigt model and its generalizations. Evolution Equations and Control Theory, 2012, 1, 17-42.	1.3	35
142	On the conditional stability of the rest state of a fluid of second grade in unbounded domains. Archive for Rational Mechanics and Analysis, 1990, 109, 173-182.	2.4	34
143	Steady flows of non-Newtonian fluids past a porous plate with suction or injection. International Journal for Numerical Methods in Fluids, 1993, 17, 927-941.	1.6	34
144	Chemorheological Relaxation, Residual Stress, and Permanent Set Arising in Radial Deformation of Elastomeric Hollow Spheres. Mathematics and Mechanics of Solids, 1996, 1, 267-299.	2.4	34

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145	On the modeling of inhomogeneous incompressible fluid-like bodies. Mechanics of Materials, 2006, 38, 233-242.	3.2	34
146	A promising approach for modeling biological fibers. Acta Mechanica, 2016, 227, 1609-1619.	2.1	34
147	On the Classification of Incompressible Fluids and a Mathematical Analysis of the Equations That Govern Their Motion. SIAM Journal on Mathematical Analysis, 2020, 52, 1232-1289.	1.9	34
148	A BOUNDARY VALUE PROBLEM IN GROUNDWATER MOTION ANALYSIS â€" COMPARISON OF PREDICTIONS BASED ON DARCYâ€™S LAW AND THE CONTINUUM THEORY OF MIXTURES. Mathematical Models and Methods in Applied Sciences, 1993, 03, 231-248.	3.3	33
149	A mixture theory for heat-induced alterations in hydration and mechanical properties in soft tissues. International Journal of Engineering Science, 2001, 39, 1535-1556.	5.0	33
150	Pulsatile Flow of a Chemically-Reacting Nonlinear Fluid. Computers and Mathematics With Applications, 2006, 52, 1131-1144.	2.7	33
151	On a new class of electroelastic bodies. I. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20120521.	2.1	33
152	Existence of solutions for the anti-plane stress for a new class of â€œstrain-limitingâ€•elastic bodies. Calculus of Variations and Partial Differential Equations, 2015, 54, 2115-2147.	1.7	32
153	Nonlinear Reynolds equation for hydrodynamic lubrication. Applied Mathematical Modelling, 2015, 39, 5299-5309.	4.2	32
154	Determination of pressure data from velocity data with a view toward its application in cardiovascular mechanics. Part 1. Theoretical considerations. International Journal of Engineering Science, 2016, 105, 108-127.	5.0	32
155	A thermodynamic framework for a mixture of two liquids. Nonlinear Analysis: Real World Applications, 2008, 9, 1649-1660.	1.7	31
156	A numerical study of elastic bodies that are described by constitutive equations that exhibit limited strains. International Journal of Solids and Structures, 2014, 51, 875-885.	2.7	31
157	Inelastic response of solids described by implicit constitutive relations with nonlinear small strain elastic response. International Journal of Plasticity, 2015, 71, 1-9.	8.8	31
158	Stability analysis of the Rayleighâ€“BÃ©nard convection for a fluid with temperature and pressure dependent viscosity. Zeitschrift Fur Angewandte Mathematik Und Physik, 2009, 60, 739-755.	1.4	30
159	Shear flows of a new class of power-law fluids. Applications of Mathematics, 2013, 58, 153-177.	0.9	30
160	Unsteady motions of a new class of elastic solids. Wave Motion, 2014, 51, 833-843.	2.0	30
161	A thermodynamically consistent constitutive equation for describing the response exhibited by several alloys and the study of a meaningful physical problem. International Journal of Solids and Structures, 2017, 108, 1-10.	2.7	30
162	On the effect of dissipation in shape-memory alloys. Nonlinear Analysis: Real World Applications, 2003, 4, 581-597.	1.7	29

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163	Study of a variant of Stokesâ€™ first and second problems for fluids with pressure dependent viscosities. International Journal of Engineering Science, 2009, 47, 1357-1366.	5.0	29
164	A Thermomechanical Framework for the Transition of a Viscoelastic Liquid to a Viscoelastic Solid. Mathematics and Mechanics of Solids, 2004, 9, 37-59.	2.4	29
165	Lubrication With Binary Mixtures: Liquid-Liquid Emulsion in an EHL Conjunction. Journal of Tribology, 1993, 115, 515-522.	1.9	28
166	Boundary layers in finite thermoelasticity. Journal of Elasticity, 1995, 36, 271-301.	1.9	28
167	An implicit thermomechanical theory based on a Gibbs potential formulation for describing the response of thermoviscoelastic solids. International Journal of Engineering Science, 2013, 70, 15-28.	5.0	28
168	A thermodynamic framework for additive manufacturing, using amorphous polymers, capable of predicting residual stress, warpage and shrinkage. International Journal of Engineering Science, 2021, 159, 103412.	5.0	28
169	A class of exact solutions to the Navier-Stokes equations. International Journal of Engineering Science, 1984, 22, 451-455.	5.0	27
170	On an inhomogeneous deformation of a generalized Neo-Hookean material. Journal of Elasticity, 1992, 28, 165-184.	1.9	27
171	The mechanics and mathematics of the effect of pressure on the shear modulus of elastomers. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2009, 465, 3859-3874.	2.1	27
172	On the Modeling of the Synovial Fluid. Advances in Tribology, 2010, 2010, 1-12.	2.1	27
173	A nonlinear viscoelastic constitutive model for polymeric solids based on multiple natural configuration theory. International Journal of Solids and Structures, 2016, 100-101, 95-110.	2.7	27
174	Finite element modelling of field compaction of hot mix asphalt. Part II: Applications. International Journal of Pavement Engineering, 2016, 17, 24-38.	4.4	27
175	A continuum model for the anisotropic creep of single crystal nickel-based superalloys. Acta Materialia, 2006, 54, 1487-1500.	7.9	26
176	A viscoelastic fluid model for describing the mechanics of a coarse ligated plasma clot. Theoretical and Computational Fluid Dynamics, 2006, 20, 239-250.	2.2	26
177	A note on the flow through porous solids at high pressures. Computers and Mathematics With Applications, 2007, 53, 260-275.	2.7	26
178	A note on the classification of anisotropy of bodies defined by implicit constitutive relations. Mechanics Research Communications, 2015, 64, 38-41.	1.8	26
179	Combined extension and torsion of a swollen cylinder within the context of mixture theory. Acta Mechanica, 1989, 79, 81-95.	2.1	25
180	Multiplicity of solutions in von karman flows of viscoelastic fluids. Journal of Non-Newtonian Fluid Mechanics, 1990, 36, 1-25.	2.4	25

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181	Some inhomogeneous motions and deformations within the context of a non-linear elastic solid. International Journal of Engineering Science, 1992, 30, 919-938.	5.0	25
182	Flow of granular materials between rotating disks. Mechanics Research Communications, 1994, 21, 629-634.	1.8	25
183	On the Diffusion of Fluids Through Solids Undergoing Large Deformations. Mathematics and Mechanics of Solids, 2006, 11, 291-305.	2.4	25
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