Wojciech Sumelka

List of Publications by Year
in descending order

92	1,266	394421 19	454955 30
papers	citations	h-index	g-index

97	97	97	666
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Fractional viscoplasticity. Mechanics Research Communications, 2014, 56, 31-36.	1.8	104
2	Fractional Eulerâ€“Bernoulli beams: Theory, numerical study and experimental validation. European Journal of Mechanics, A/Solids, 2015, 54, 243-251.	3.7	66
3	Thermoelasticity in the Framework of the Fractional Continuum Mechanics. Journal of Thermal Stresses, 2014, 37, 678-706.	2.0	65
4	Nonâ€normality and induced plastic anisotropy under fractional plastic flow rule: a numerical study. International Journal for Numerical and Analytical Methods in Geomechanics, 2016, 40, 651-675.	3.3	51
5	A hyperelastic fractional damage material model with memory. International Journal of Solids and Structures, 2017, 124, 151-160.	2.7	43
6	Brain modelling in the framework of anisotropic hyperelasticity with time fractional damage evolution governed by the Caputo-Almeida fractional derivative. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 89, 209-216.	3.1	42
7	The Development of a New Shock Absorbing Uniaxial Graded Auxetic Damper (UGAD). Materials, 2019, 12, 2573.	2.9	36
8	The Numerical Analysis of the Intrinsic Anisotropic Microdamage Evolution in Elasto-Viscoplastic Solids. International Journal of Damage Mechanics, 2009, 18, 205-231.	4.2	34
9	Non-local Kirchhoffâ€“Love plates in terms of fractional calculus. Archives of Civil and Mechanical Engineering, 2015, 15, 231-242.	3.8	33
10	Modelling of AAA in the framework of time-fractional damage hyperelasticity. International Journal of Solids and Structures, 2020, 206, 30-42.	2.7	31
11	Application of fractional continuum mechanics to rate independent plasticity. Acta Mechanica, 2014, 225, 3247-3264.	2.1	30
12	On fractional non-local bodies with variable length scale. Mechanics Research Communications, 2017, 86, 5-10.	1.8	29
13	On a general numerical scheme for the fractional plastic flow rule. Mechanics of Materials, 2018, 116, 120-129.	3.2	29
14	A theoretical analysis of the free axial vibration of non-local rods with fractional continuum mechanics. Meccanica, 2015, 50, 2309-2323.	2.0	28
15	Study and control of thermoelastic damping of in-plane vibration of the functionally graded nano-plate. JVC/Journal of Vibration and Control, 2019, 25, 2850-2862.	2.6	23
16	Fractional viscoplastic model for soils under compression. Acta Mechanica, 2019, 230, 3365-3377.	2.1	22
17	A New Blast Absorbing Sandwich Panel with Unconnected Corrugated Layersâ€”Numerical Study. Energies, 2021, 14, 214.	3.1	22
18	Reduction of the number of material parameters by ANN approximation. Computational Mechanics, 2013, 52, 287-300.	4.0	21

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19	A new fractional nonlocal model and its application in free vibration of Timoshenko and Euler-Bernoulli beams. European Physical Journal Plus, 2017, 132, 1.	2.6	21
20	Space-fractional Euler-Bernoulli beam model - Theory and identification for silver nanobeam bending. International Journal of Mechanical Sciences, 2020, 186, 105902.	6.7	21
21	Phenomenological fractional stressâ€“dilatancy model for granular soil and soil-structure interface under monotonic and cyclic loads. Acta Geotechnica, 2021, 16, 3115-3132.	5.7	19
22	Discrete mass-spring structure identification in nonlocal continuum space-fractional model. European Physical Journal Plus, 2019, 134, 1.	2.6	18
23	The influence of the initial microdamage anisotropy on macrodamage mode during extremely fast thermomechanical processes. Archive of Applied Mechanics, 2011, 81, 1973-1992.	2.2	17
24	Linear and non-linear free vibration of nano beams based on a new fractional non-local theory. Engineering Computations, 2017, 34, 1754-1770.	1.4	17
25	Multiaxial stress-fractional plasticity model for anisotropically overconsolidated clay. International Journal of Mechanical Sciences, 2021, 205, 106598.	6.7	16
26	Theoretical and computational analysis of nonlinear fractional integro-differential equations via collocation method. Chaos, Solitons and Fractals, 2021, 151, 111252.	5.1	16
27	Field test and probabilistic analysis of irregular steel debris casualty risks from a person-borne improvised explosive device. Defence Technology, 2021, 17, 1852-1863.	4.2	15
28	Advancement of Non-Newtonian Fluid with Hybrid Nanoparticles in a Convective Channel and Prabhakarâ€™s Fractional Derivativeâ€”Analytical Solution. Fractal and Fractional, 2021, 5, 99.	3.3	15
29	Advantages and limitations of an Î±-plasticity model for sand. Acta Geotechnica, 2020, 15, 1423-1437.	5.7	14
30	Improving the Blast Resistance of Large Steel Gatesâ€”Numerical Study. Materials, 2020, 13, 2121.	2.9	14
31	Numerical investigation on ballistic resistance of aluminium multi-layered panels impacted by improvised projectiles. Archive of Applied Mechanics, 2018, 88, 51-63.	2.2	13
32	On selected aspects of space-fractional continuum mechanics model approximation. International Journal of Mechanical Sciences, 2020, 167, 105287.	6.7	13
33	Three-dimensional analysis of nonlocal plate vibration in the framework of space-fractional mechanics â€” Theory and validation. Thin-Walled Structures, 2021, 163, 107645.	5.3	13
34	Plane strain and plane stress elasticity under fractional continuum mechanics. Archive of Applied Mechanics, 2015, 85, 1527-1544.	2.2	12
35	Fractional calculus for continuum mechanics â€“ anisotropic non-locality. Bulletin of the Polish Academy of Sciences: Technical Sciences, 2016, 64, 361-372.	0.8	12
36	A non-local fractional stressâ€“strain gradient theory. International Journal of Mechanics and Materials in Design, 2020, 16, 265-278.	3.0	12

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37	Karlsruhe fine sand under monotonic and cyclic loads: Modelling and validation. Soil Dynamics and Earthquake Engineering, 2020, 133, 106119.	3.8	12
38	Blast Test and Failure Mechanisms of Soft-Core Sandwich Panels for Storage Halls Applications. Materials, 2021, 14, 70.	2.9	12
39	Mechanism of Solute and Thermal Characteristics in a Casson Hybrid Nanofluid Based with Ethylene Glycol Influenced by Soret and Dufour Effects. Energies, 2021, 14, 6818.	3.1	12
40	Role of Covariance in Continuum Damage Mechanics. Journal of Engineering Mechanics - ASCE, 2013, 139, 1610-1620.	2.9	11
41	Nonlocal vibration analysis of microstretch plates in the framework of space-fractional mechanicsâ€"theory and validation. European Physical Journal Plus, 2021, 136, 1.	2.6	11
42	Formulation and experimental validation of space-fractional Timoshenko beam model with functionally graded materials effects. Computational Mechanics, 2021, 68, 697-708.	4.0	11
43	Dynamic failure of the aluminium plate under air-blast loading in the framework of the fractional viscoplasticity model - theory and validation. International Journal of Impact Engineering, 2021, 158, 104024.	5.0	11
44	Numerical simulation of a Caputo fractional epidemic model for the novel coronavirus with the impact of environmental transmission. AEJ - Alexandria Engineering Journal, 2022, 61, 5083-5095.	6.4	11
45	Close Range Explosive Loading on Steel Column in the Framework of Anisotropic Viscoplasticity. Metals, 2019, 9, 454.	2.3	10
46	Reformulated fractional plasticity for soil-structure interface. Mechanics Research Communications, 2020, 108, 103580.	1.8	10
47	Thermal Stresses in Metallic Materials Due to Extreme Loading Conditions. Journal of Engineering Materials and Technology, Transactions of the ASME, 2013, 135, .	1.4	9
48	Designing of Blast Resistant Lightweight Elevation System - Numerical Study. Procedia Engineering, 2017, 172, 991-998.	1.2	9
49	Fractional strain energy and its application to the free vibration analysis of a plate. Microsystem Technologies, 2019, 25, 2229-2238.	2.0	8
50	Enhanced Fractional Model for Soilâ€"Structure Interface Considering 3D Stress State and Fabric Effect. Journal of Engineering Mechanics - ASCE, 2022, 148, .	2.9	8
51	One-dimensional dispersion phenomena in terms of fractional media. European Physical Journal Plus, 2016, 131, 1.	2.6	7
52	Effects of the slip boundary condition on dynamics and pull-in instability of carbon nanotubes conveying fluid. Microfluidics and Nanofluidics, 2018, 22, 1.	2.2	7
53	Numerical Study of Dynamic Properties of Fractional Viscoplasticity Model. Symmetry, 2018, 10, 282.	2.2	7
54	Bounding surface plasticity for sand using fractional flow rule and modified critical state line. Archive of Applied Mechanics, 2020, 90, 2561-2577.	2.2	7

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55	Approximation and application of the Riesz-Caputo fractional derivative of variable order with fixed memory. Meccanica, 2022, 57, 861-870.	2.0	7
56	Mathematical assessment of constant and time-dependent control measures on the dynamics of the novel coronavirus: An application of optimal control theory. Results in Physics, 2021, 31, 104971.	4.1	7
57	Fabrication and Mechanical Testing of the Uniaxial Graded Auxetic Damper. Materials, 2022, 15, 387.	2.9	7
58	A COMPUTATIONAL ALGORITHM FOR THE NUMERICAL SOLUTION OF NONLINEAR FRACTIONAL INTEGRAL EQUATIONS. Fractals, 2022, 30, .	3.7	7
59	Plastic strain localization in an extreme dynamic tension test of steel sheet in the framework of fractional viscoplasticity. Thin-Walled Structures, 2020, 149, 106522.	5.3	5
60	Dynamics of Space-Fractional Eulerâ€“Bernoulli and Timoshenko Beams. Materials, 2021, 14, 1817.	2.9	5
61	Towards the Modelling of Anisotropic Solids. Computational Methods in Science and Technology, 2010, 16, 73-84.	0.3	5
62	Identification of mechanical properties of 1D deteriorated non-local bodies. Structural and Multidisciplinary Optimization, 2019, 59, 185-200.	3.5	4
63	Fractional Euler-Bernoulli Beam Theory Based on the Fractional Strain-Displacement Relation and its Application in Free Vibration, Bending and Buckling Analyses of Micro/Nanobeams. Acta Physica Polonica A, 2018, 134, 574-582.	0.5	4
64	Analysis of the process of wood plasticization by hot rolling. Journal of Theoretical and Applied Mechanics, 0, , 503.	0.5	4
65	Experimental Analysis of Mechanical Anisotropy of Selected Roofing Felts. Materials, 2021, 14, 6907.	2.9	4
66	Space-fractional small-strain plasticity model for microbeams including grain size effect. International Journal of Engineering Science, 2022, 175, 103672.	5.0	4
67	Application verification of blast mitigation through the use of thuja hedges. International Journal of Protective Structures, 2022, 13, 363-378.	2.3	4
68	Role of the Virtual Boundary Layer in One-Dimensional Fractional Elasticity Problems. Journal of Engineering Mechanics - ASCE, 2017, 143, .	2.9	3
69	A Mechanical Model Based on Conformal Strain Energy and Its Application to Bending and Buckling of Nanobeam Structures. Journal of Computational and Nonlinear Dynamics, 2019, 14, .	1.2	3
70	Numerical algorithm for predicting wheel flange wear in trams â€“ Validation in a curved track. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 2020, 234, 1156-1169.	2.0	3
71	On numerical approximation of the Rieszâ€“Caputo operator with the fixed/short memory length. Journal of King Saud University - Science, 2021, 33, 101220.	3.5	3
72	Thermoelastic damping in orthotropic and isotropic NEMS resonators accounting for double nonlocal thermoelastic effects. Journal of Thermal Stresses, 0, , 1-16.	2.0	3

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73	Fractional plasticity for over-consolidated soft soil. Meccanica, 0, , 1.	2.0	3
74	Bounding surface model refined with fractional dilatancy relation for sand. Soils and Foundations, 2022, 62, 101149.	3.1	3
75	A THERMODYNAMIC CONSISTENT ELASTOPLASTIC FRACTIONAL TIME-DEPENDENT DAMAGE MODEL FOR ROCK-LIKE MATERIALS. Fractals, 2021, 29, 2150045.	3.7	2
76	Designing of Dynamic Spectrum Shifting in Terms of Non-Local Space-Fractional Mechanics. Energies, 2021, 14, 506.	3.1	2
77	New prospects in non-conventional modelling of solids and structures. Meccanica, 2022, 57, 751-755.	2.0	2
78	Viscoplasticity. , 2018, , 1-5.		1
79	Designing of Multilayered Protective Panels Against Improvised Debris. Lecture Notes in Mechanical Engineering, 2017, , 561-570.	0.4	1
80	Anisotropic Damage for Extreme Dynamics. , 2015, , 1185-1220.		1
81	Identification of Aluminium Powder Properties for Modelling Free Air Explosions. Materials, 2022, 15, 1294.	2.9	1
82	Trends in computational material modeling. Computational Mechanics, 2021, 68, 459-459.	4.0	0
83	Anisotropic Damage for Extreme Dynamics. , 2013, , 1-32.		0
84	Computer estimation of plastic strain localization and failure for large strain rates using viscoplasticity. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2014, , 209-244.	0.6	0
85	On geometrical interpretation of the fractional strain concept. Journal of Theoretical and Applied Mechanics, 0, , .	0.5	0
86	Implicit Nonlocality in the Framework of Viscoplasticity. , 2017, , 1-37.		0
87	PrzeciwpoÅ¼arowe drzwi, bramy i otwieralne okna w Å›wietle normy PN-EN 16034:2014-11. MateriaÅy Budowlane, 2018, 1, 95-97.	0.1	0
88	Implicit Nonlocality in the Framework of Viscoplasticity. , 2019, , 743-780.		0
89	Complexity of an Identification Problem of Sharp Local Density Loss in Fractional Body. Lecture Notes in Electrical Engineering, 2020, , 282-293.	0.4	0
90	Auxetic Damping Systems for Blast Vulnerable Structures. , 2020, , 1-23.		0

#	Article	IF	Citations
91	Viscoplasticity. , 2020, , 2728-2733.		0
92	Auxetic Damping Systems for Blast Vulnerable Structures. , 2022, , 353-375.		0