

Mohammad Taghi Ahmadian

List of Publications by Year in descending order

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94
papers

3,427
citations

201575

27
h-index

143943

57
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94
all docs

94
docs citations

94
times ranked

1338
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of axonal fiber architecture on mechanical heterogeneity of the white matter—a statistical micromechanical model. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2022, 25, 27-39.	0.9	2
2	Subsonic and supersonic flow-induced vibration of sandwich cylindrical shells with FG-CNT reinforced composite face sheets and metal foam core. <i>International Journal of Mechanical Sciences</i> , 2022, 215, 106918.	3.6	20
3	Size effects on stability and bifurcation of nonlinear viscoelastic microcantilevers based on strain gradient. <i>Journal of the Brazilian Society of Mechanical Sciences and Engineering</i> , 2022, 44, 1.	0.8	1
4	Time-domain ultrasound as prior information for frequency-domain compressive ultrasound for intravascular cell detection: A 2-cell numerical model. <i>Ultrasonics</i> , 2022, 125, 106791.	2.1	3
5	Dynamic and vibration analysis of a 3-serial-link micro/nano-manipulator with piezoelectric actuation. <i>Microsystem Technologies</i> , 2021, 27, 703-721.	1.2	2
6	A holey cavity for single-transducer 3D ultrasound imaging with physical optimization. <i>Signal Processing</i> , 2021, 179, 107826.	2.1	6
7	Interaction analysis of a pregnant female uterus and fetus in a vehicle passing a speed bump. <i>Journal of Biomechanics</i> , 2021, 118, 110257.	0.9	1
8	A holistic survey on mechatronic Systems in Micro/Nano scale with challenges and applications. <i>Journal of Micro-Bio Robotics</i> , 2021, 17, 1-22.	2.1	9
9	Adaptive fuzzy controller design of drug dosage using optimal trajectories in a chemoimmunotherapy cancer treatment model. <i>Informatics in Medicine Unlocked</i> , 2021, 27, 100782.	1.9	1
10	Quick, Single-Frequency Dielectric Characterization of Blood Samples of Pediatric Cancer Patients by a Cylindrical Capacitor: Pilot Study. <i>Electronics (Switzerland)</i> , 2020, 9, 95.	1.8	3
11	Rigid-bar loading on pregnant uterus and development of pregnant abdominal response corridor based on finite element biomechanical model. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2020, 36, e3284.	1.0	5
12	On the mechanical characteristics of graphene nanosheets: a fully nonlinear modified Morse model. <i>Nanotechnology</i> , 2020, 31, 115708.	1.3	7
13	A Three-Dimensional Statistical Volume Element for Histology Informed Micromechanical Modeling of Brain White Matter. <i>Annals of Biomedical Engineering</i> , 2020, 48, 1337-1353.	1.3	12
14	Complex modal analysis and coupled electromechanical simulation of energy harvesting piezoelectric laminated beams. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2019, 233, 2526-2537.	1.1	4
15	Vibration Control and Manufacturing of Intelligibly Designed Axially Functionally Graded Cantilevered Macro/Micro-tubes. <i>IFAC-PapersOnLine</i> , 2019, 52, 382-387.	0.5	29
16	Numerical and Experimental Evaluation of High-Intensity Focused Ultrasound-Induced Lesions in Liver Tissue Ex Vivo. <i>Journal of Ultrasound in Medicine</i> , 2018, 37, 1481-1491.	0.8	13
17	Analytical and numerical simulations of energy harvesting using MEMS devices operating in nonlinear regime. <i>European Physical Journal B</i> , 2018, 91, 1.	0.6	9
18	Coupled electromechanical analysis of MEMS-based energy harvesters integrated with nonlinear power extraction circuits. <i>Microsystem Technologies</i> , 2017, 23, 2403-2420.	1.2	13

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19	Micromechanical modeling of rate-dependent behavior of Connective tissues. <i>Journal of Theoretical Biology</i> , 2017, 416, 119-128.	0.8	8
20	Design and analysis of a 3-link micro-manipulator actuated by piezoelectric layers. <i>Mechanism and Machine Theory</i> , 2017, 112, 43-60.	2.7	7
21	On the energy extraction from large amplitude vibrations of MEMS-based piezoelectric harvesters. <i>Acta Mechanica</i> , 2017, 228, 3445-3468.	1.1	13
22	Rate-dependent behavior of connective tissue through a micromechanics-based hyper viscoelastic model. <i>International Journal of Engineering Science</i> , 2017, 121, 91-107.	2.7	14
23	Electromechanical modeling and analytical investigation of nonlinearities in energy harvesting piezoelectric beams. <i>International Journal of Mechanics and Materials in Design</i> , 2017, 13, 499-514.	1.7	21
24	Characterization of a nonlinear MEMS-based piezoelectric resonator for wideband micro power generation. <i>Applied Mathematical Modelling</i> , 2017, 41, 121-142.	2.2	21
25	Simulation of Paramecium Chemotaxis Exposed to Calcium Gradients. <i>Cell Biochemistry and Biophysics</i> , 2016, 74, 241-252.	0.9	5
26	Micromechanics and constitutive modeling of connective soft tissues. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016, 60, 157-176.	1.5	10
27	Vibration analysis of electrostatically actuated nonlinear microbridges based on the modified couple stress theory. <i>Applied Mathematical Modelling</i> , 2015, 39, 6694-6704.	2.2	32
28	Acoustic scattering from submerged laminated composite cylindrical shells. <i>Composite Structures</i> , 2015, 128, 395-405.	3.1	17
29	On pull-in instabilities of microcantilevers. <i>International Journal of Engineering Science</i> , 2015, 87, 23-31.	2.7	21
30	On the Pull-in Instability of Double-Walled Carbon Nanotube-Based Nano Electromechanical Systems with Cross-Linked Walls. <i>Fullerenes Nanotubes and Carbon Nanostructures</i> , 2015, 23, 300-314.	1.0	3
31	A Timoshenko beam element based on the modified couple stress theory. <i>International Journal of Mechanical Sciences</i> , 2014, 79, 75-83.	3.6	98
32	A size-dependent yield criterion. <i>International Journal of Engineering Science</i> , 2014, 74, 151-161.	2.7	27
33	Dynamic analysis of carbon nanotubes under electrostatic actuation using modified couple stress theory. <i>Acta Mechanica</i> , 2014, 225, 1523-1535.	1.1	22
34	Nonlinear analysis of carbon nanotube-based nanoelectronics devices. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2014, 228, 2426-2439.	1.1	4
35	Size-dependent dynamic behavior of microcantilevers under suddenly applied DC voltage. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2014, 228, 896-906.	1.1	16
36	A strain gradient based yield criterion. <i>International Journal of Engineering Science</i> , 2014, 77, 45-54.	2.7	10

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37	Fluid-solid interaction in electrostatically actuated carbon nanotubes. <i>Journal of Mechanical Science and Technology</i> , 2014, 28, 1431-1439.	0.7	3
38	A coupled bending-torsion model for electrostatically actuated torsional nano/micro-actuators with considering influence of van der Waals force. <i>Acta Mechanica</i> , 2013, 224, 1791-1800.	1.1	5
39	Acoustic wave propagation through a functionally graded material plate with arbitrary material properties. <i>Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications</i> , 2013, 227, 100-110.	0.7	2
40	Static deflection and pull-in instability analysis of an electrostatically actuated microcantilever gyroscope considering geometric nonlinearities. <i>Journal of Mechanical Science and Technology</i> , 2013, 27, 2425-2434.	0.7	14
41	Analytical closed form model for static pull-in analysis in electrostatically actuated torsional micromirrors. <i>Journal of Mechanical Science and Technology</i> , 2013, 27, 1443-1449.	0.7	11
42	Analytical modeling of bending effect on the torsional response of electrostatically actuated micromirrors. <i>Optik</i> , 2013, 124, 1278-1286.	1.4	22
43	Modeling squeezed film air damping in torsional micromirrors using extended Kantorovich method. <i>Meccanica</i> , 2013, 48, 791-805.	1.2	15
44	Strain gradient beam element. <i>Finite Elements in Analysis and Design</i> , 2013, 68, 63-75.	1.7	84
45	Longitudinal behavior of strain gradient bars. <i>International Journal of Engineering Science</i> , 2013, 66-67, 44-59.	2.7	29
46	Strain gradient formulation of functionally graded nonlinear beams. <i>International Journal of Engineering Science</i> , 2013, 65, 49-63.	2.7	39
47	Mechanical behavior analysis of size-dependent micro-scaled functionally graded Timoshenko beams by strain gradient elasticity theory. <i>Composite Structures</i> , 2013, 102, 72-80.	3.1	44
48	Nonlinear forced vibration of strain gradient microbeams. <i>Applied Mathematical Modelling</i> , 2013, 37, 8363-8382.	2.2	45
49	Investigation of the Mechanical Behaviors of Carbon Nanotubes Under Electrostatic Actuation Using the Modified Couple Stress Theory. <i>Fullerenes Nanotubes and Carbon Nanostructures</i> , 2013, 21, 930-945.	1.0	6
50	The Oscillatory Behavior of Doubly Clamped Microgyroscopes Under Electrostatic Actuation and Detection. , 2013, , .		0
51	Characterization of Static Behavior of a Nonlinear Doubly Clamped Microbeam Under Electrostatic Actuation and Detection. , 2013, , .		0
52	Oscillatory Behavior of the Nonlinear Clamped-Free Beam Microgyroscopes Under Electrostatic Actuation and Detection. , 2013, , .		0
53	Analysis of pull-in instability of electrostatically actuated carbon nanotubes using the homotopy perturbation method. <i>Journal of Mechanics of Materials and Structures</i> , 2013, 8, 385-401.	0.4	5
54	Size-dependent characteristics of electrostatically actuated fluid-conveying carbon nanotubes based on modified couple stress theory. <i>Beilstein Journal of Nanotechnology</i> , 2013, 4, 771-780.	1.5	6

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55	Forced Vibration of Delaminated Timoshenko Beams under the Action of Moving Oscillatory Mass. Shock and Vibration, 2013, 20, 79-96.	0.3	5
56	Characterization of Static Behavior of Electrostatically Actuated Micro Tweezers Using Modified Couple Stress Theory. , 2012, , .		0
57	Deformation prediction by a feed forward artificial neural network during mouse embryo micromanipulation. Animal Cells and Systems, 2012, 16, 121-126.	0.8	0
58	Nonlinear size-dependent forced vibrational behavior of microbeams based on a non-classical continuum theory. JVC/Journal of Vibration and Control, 2012, 18, 696-711.	1.5	36
59	Static and vibrational analysis of fullerene using a newly designed spherical super element. Scientia Iranica, 2012, 19, 1316-1323.	0.3	6
60	Influence of Fringing Field Effect on the Pull-In of Size Dependent Micro-Beams. , 2012, , .		0
61	Analytical modeling of static behavior of electrostatically actuated nano/micromirrors considering van der Waals forces. Acta Mechanica Sinica/Lixue Xuebao, 2012, 28, 729-736.	1.5	11
62	A strain gradient functionally graded Euler-Bernoulli beam formulation. International Journal of Engineering Science, 2012, 52, 65-76.	2.7	165
63	Design and implementation of a new spherical super element in structural analysis. Applied Mathematics and Computation, 2012, 218, 7546-7561.	1.4	10
64	Size-dependent pull-in phenomena in nonlinear microbridges. International Journal of Mechanical Sciences, 2012, 54, 306-310.	3.6	64
65	Simulation of red blood cell motion in microvessels using modified moving particle semi-implicit method. Scientia Iranica, 2012, 19, 113-118.	0.3	12
66	Nonlinear oscillation analysis of a pendulum wrapping on a cylinder. Scientia Iranica, 2012, 19, 335-340.	0.3	5
67	A coupled two degree of freedom pull-in model for micromirrors under capillary force. Acta Mechanica, 2012, 223, 387-394.	1.1	12
68	Static pull-in analysis of microcantilevers based on the modified couple stress theory. Sensors and Actuators A: Physical, 2011, 171, 370-374.	2.0	134
69	A nonlinear strain gradient beam formulation. International Journal of Engineering Science, 2011, 49, 1256-1267.	2.7	155
70	A homotopy perturbation analysis of nonlinear free vibration of Timoshenko microbeams. Journal of Mechanical Science and Technology, 2011, 25, 557-565.	0.7	46
71	Torsion of strain gradient bars. International Journal of Engineering Science, 2011, 49, 856-866.	2.7	80
72	Nonlinear dynamic analysis of a V-shaped microcantilever of an atomic force microscope. Applied Mathematical Modelling, 2011, 35, 5903-5919.	2.2	29

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73	The modified couple stress functionally graded Timoshenko beam formulation. <i>Materials & Design</i> , 2011, 32, 1435-1443.	5.1	275
74	Non-linear vibration analysis of laminated composite plates resting on non-linear elastic foundations. <i>Journal of the Franklin Institute</i> , 2011, 348, 353-368.	1.9	27
75	Sensitivity and resonant frequency of an AFM with sidewall and top-surface probes for both flexural and torsional modes. <i>International Journal of Mechanical Sciences</i> , 2010, 52, 1357-1365.	3.6	41
76	Nonlinear transversal vibration of an axially moving viscoelastic string on a viscoelastic guide subjected to mono-frequency excitation. <i>Acta Mechanica</i> , 2010, 214, 357-373.	1.1	12
77	Static pull-in analysis of electrostatically actuated microbeams using homotopy perturbation method. <i>Applied Mathematical Modelling</i> , 2010, 34, 1032-1041.	2.2	116
78	On the size-dependent behavior of functionally graded micro-beams. <i>Materials & Design</i> , 2010, 31, 2324-2329.	5.1	326
79	Investigation of the size-dependent dynamic characteristics of atomic force microscope microcantilevers based on the modified couple stress theory. <i>International Journal of Engineering Science</i> , 2010, 48, 1985-1994.	2.7	182
80	A nonlinear Timoshenko beam formulation based on the modified couple stress theory. <i>International Journal of Engineering Science</i> , 2010, 48, 1749-1761.	2.7	363
81	Investigation of the Oscillatory Behavior of Electrostatically-Actuated Microbeams. , 2010, , .		1
82	The dynamic analysis of a novel dental implant with a viscoelastic internal damping layer. , 2010, , .		2
83	On the Primary Resonance of an Electrostatically Actuated MEMS Using the Homotopy Perturbation Method. , 2009, , .		0
84	Investigation of Casimir and Van der Waals Forces for a Nonlinear Double-Clamped Beam Using Homotopy Perturbation Method. , 2009, , .		0
85	Application of homotopy analysis method in studying dynamic pull-in instability of microsystems. <i>Mechanics Research Communications</i> , 2009, 36, 851-858.	1.0	92
86	On the large amplitude free vibrations of tapered beams: an analytical approach. <i>Mechanics Research Communications</i> , 2009, 36, 892-897.	1.0	26
87	On the homotopy analysis method for non-linear vibration of beams. <i>Mechanics Research Communications</i> , 2009, 36, 143-148.	1.0	101
88	Semi-analytic solutions to nonlinear vibrations of microbeams under suddenly applied voltages. <i>Journal of Sound and Vibration</i> , 2009, 325, 382-396.	2.1	52
89	Vibrational analysis of electrostatically actuated microstructures considering nonlinear effects. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2009, 14, 1664-1678.	1.7	66
90	Effect of geometric nonlinearity on dynamic pull-in behavior of coupled-domain microstructures based on classical and shear deformation plate theories. <i>European Journal of Mechanics, A/Solids</i> , 2009, 28, 916-925.	2.1	37

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91	Duffing equations with cubic and quintic nonlinearities. Computers and Mathematics With Applications, 2009, 57, 500-506.	1.4	43
92	Nonlinear free vibration of conservative oscillators with inertia and static type cubic nonlinearities using homotopy analysis method. Journal of Sound and Vibration, 2008, 316, 263-273.	2.1	28
93	Characterization of coupled-domain multi-layer microplates in pull-in phenomenon, vibrations and dynamics. International Journal of Mechanical Sciences, 2007, 49, 1226-1237.	3.6	48
94	Geometric effect of stem on stress distribution and prosthesis failure. , 0, , .		0