Mahdi Moghimi Zand

List of Publications by Year
in descending order

57	873	566801 15	500791 28
papers	citations	h-index	g-index

61	61	61	441
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Static pull-in analysis of electrostatically actuated microbeams using homotopy perturbation method. Applied Mathematical Modelling, 2010, 34, 1032-1041.	2.2	116
2	Application of homotopy analysis method in studying dynamic pull-in instability of microsystems. Mechanics Research Communications, 2009, 36, 851-858.	1.0	92
3	Dynamic pull-in instability of electrostatically actuated beams incorporating Casimir and van der Waals forces. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2010, 224, 2037-2047.	1.1	81
4	Vibrational analysis of electrostatically actuated microstructures considering nonlinear effects. Communications in Nonlinear Science and Numerical Simulation, 2009, 14, 1664-1678.	1.7	66
5	Semi-analytic solutions to nonlinear vibrations of microbeams under suddenly applied voltages. Journal of Sound and Vibration, 2009, 325, 382-396.	2.1	52
6	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
7	ANALYTIC SOLUTIONS TO THE OSCILLATORY BEHAVIOR AND PRIMARY RESONANCE OF ELECTROSTATICALLY ACTUATED MICROBRIDGES. International Journal of Structural Stability and Dynamics, 2011, 11, 1119-1137.	1.5	42
8	Effect of geometric nonlinearity on dynamic pull-in behavior of coupled-domain microstructures based on classical and shear deformation plate theories. European Journal of Mechanics, A/Solids, 2009, 28, 916-925.	2.1	37
9	The Dynamic Pull-In Instability and Snap-Through Behavior of Initially Curved Microbeams. Mechanics of Advanced Materials and Structures, 2012, 19, 485-491.	1.5	30
10	Wearable electrochemical flexible biosensors: With the focus on affinity biosensors. Sensing and Bio-Sensing Research, 2021, 32, 100403.	2.2	29
11	Semi-analytic solutions to oscillatory behavior of initially curved micro/nano systems. Journal of Mechanical Science and Technology, 2015, 29, 3855-3863.	0.7	21
12	Rheotaxis-based sperm separation using a biomimicry microfluidic device. Scientific Reports, 2021, 11, 18327.	1.6	21
13	Transient behavior and dynamic pull-in instability of electrostatically-actuated fluid-conveying microbeams. Microsystem Technologies, 2017, 23, 6015-6023.	1.2	18
14	Effect of input voltage frequency on the distribution of electrical stresses on the cell surface based on single-cell dielectrophoresis analysis. Scientific Reports, 2020, 10, 68.	1.6	18
15	Dynamic pull-in and snap-through behavior in micro/nano mechanical memories considering squeeze film damping. Microsystem Technologies, 2017, 23, 1423-1432.	1.2	17
16	Dynamics and vibrations of particle-sensing MEMS considering thermal and electrostatic actuation. Microsystem Technologies, 2018, 24, 1545-1552.	1.2	17
17	Numerical simulation of critical particle size in asymmetrical deterministic lateral displacement. Journal of Chromatography A, 2021, 1649, 462216.	1.8	15
18	Cell properties assessment using optimized dielectrophoresis-based cell stretching and lumped mechanical modeling. Scientific Reports, 2021, 11, 2341.	1.6	13

#	Article	IF	Citations
19	Dynamic pull-in instability and snap-through buckling of initially curved microbeams under the effect of squeeze-film damping, mechanical shock and axial force. Smart Materials and Structures, 2019, 28, 097001.	1.8	11
20	A visco-hyperelastic constitutive model of short- and long-term viscous effects on isotropic soft tissues. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2020, 234, 3-17.	1.1	11
21	Quantification of human sperm concentration using machine learning-based spectrophotometry. Computers in Biology and Medicine, 2020, 127, 104061.	3.9	11
22	Dielectrophoretic interaction of two particles in a uniform electric field. Microsystem Technologies, 2019, 25, 2699-2711.	1.2	10
23	Dynamic pull-in and snap-through behavior of electrostatically actuated micro-mechanical memories considering thermoelastic damping. Mechanics of Advanced Materials and Structures, 2019, 26, 1911-1919.	1.5	10
24	3D numerical simulation of acoustophoretic motion induced by boundary-driven acoustic streaming in standing surface acoustic wave microfluidics. Scientific Reports, 2021, 11, 13326.	1.6	10
25	IMPACTS OF NANOSCALE INCLUSIONS ON FIRE RETARDANCY, THERMAL STABILITY, AND MECHANICAL PROPERTIES OF POLYMERIC PVC NANOCOMPOSITES. Journal of Thermal Engineering, 2017, 3, 1308-1318.	0.8	9
26	Analytical solutions to nonlinear oscillations of micro/nano beams using higher-order beam theory. Scientia Iranica, 2016, 23, 2179-2193.	0.3	6
27	Effect of Dispersion Forces on Dynamic Stability of Electrostatically Actuated Micro/Nano-Beams in Presence of Mechanical Shocks. International Journal of Applied Mechanics, 2019, 11, 1950085.	1.3	5
28	Effect of added mass distribution on the dynamic PI and frequency shifting in MEMS and NEMS biosensors. Microsystem Technologies, 2021, 27, 693-702.	1.2	5
29	Nonlinear dynamics of flexible nanopositioning systems with geometrical imperfection. Microsystem Technologies, 2019, 25, 3813-3823.	1.2	4
30	Nonlinear Thermohyperviscoelastic Constitutive Model for Soft Materials with Strain Rate and Temperature Dependency. International Journal of Applied Mechanics, 2020, 12, 2050059.	1.3	4
31	A New Viscous Potential Function for Developing the Viscohyperelastic Constitutive Model for Bovine Liver Tissue: Continuum Formulation and Finite Element Implementation. International Journal of Applied Mechanics, 2020, 12, 2050029.	1.3	4
32	Google Scholar. Serials, 2005, 18, 70-72.	0.5	4
33	Effects of thread shape on strength and stability of dental mini-screws against orthodontic forces. Procedia Manufacturing, 2019, 35, 1032-1038.	1.9	3
34	Revealing electrical stresses acting on the surface of protoplast cells under electric field. European Journal of Mechanics, B/Fluids, 2019, 76, 292-302.	1.2	3
35	Strain-stiffening and strain-softening responses in random viscoelastic fibrous networks: interplay between fiber orientation and viscoelastic softening. Soft Materials, 2020, 18, 373-385.	0.8	3
36	Vibrational and thermoelastic behavior of punched-beam micro resonators containing odd-number of slots. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2018, 232, 2821-2829.	1.1	2

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37	Transient behavior of electrostatically-actuated micro systems considering squeeze film damping and mechanical shock. Scientia Iranica, 2017, .	0.3	2
38	Numerical study of insulation structure characteristics and arrangement effects on cell trapping using alternative current insulating based dielectrophoresis. Scientia Iranica, 2019, .	0.3	2
39	Investigation of the Oscillatory Behavior of Electrostatically-Actuated Microbeams. , 2010, , .		1
40	An analytical investigation on the new design of 3-DOF flexible nanopositioner driven by electrostatic actuators. Microsystem Technologies, 2020, 26, 3737-3745.	1.2	1
41	Numerical Analysis of Ciliary Beat in Paramecium: Increasing Ciliary Spacing as a Low Energy Cost Method for Maneuvering. Recent Patents on Mechanical Engineering, 2013, 6, 227-237.	0.2	1
42	Oscillatory Behavior of Electrostatically-Actuated Nanoplates. Recent Patents on Mechanical Engineering, 2018, 11, 155-167.	0.2	1
43	Proposing a new nonlinear hyperviscoelastic constitutive model to describe uniaxial compression behavior and dependence of stress-relaxation response on strain levels for isotropic tissue-equivalent material. Scientia Iranica, 2018, .	0.3	1
44	Developing a deformable model of liver tumor during breathing to improve targeting accuracy in image-guided therapy using finite element simulation. Scientia Iranica, 2019, .	0.3	1
45	Lower reactive oxygen species production and faster swimming speed of human sperm cells on nanodiamond spinâ€coated glass substrates. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2022, , .	1.6	1
46	Dynamics of Multilayer Microplates Considering Nonlinear Squeeze Film Damping. , 2006, , 265.		0
47	Dynamic Finite Element Modeling of Electrostatically Actuated Micro Structures Considering Squeeze Film Damping Effect. , 2006, , 317.		0
48	Dynamic Analysis of Electrically Actuated Rectangular Microplates With Nonlinear Plate Theory Under Squeeze-Film Damping Effect. , 2008, , .		0
49	Studying Dynamic Pull-In Behavior of Microbeams by Means of the Homotopy Analysis Method. , 2008, , .		0
50	On the Primary Resonance of an Electrostatically Actuated MEMS Using the Homotopy Perturbation Method. , 2009, , .		0
51	Dynamic Pull-In Instability of Initially Curved Microbeams. , 2009, , .		0
52	Contact Time Study of Microsystems Actuated by Ramp-Input Voltages. , 2009, , .		0
53	Influence of Intermolecular Forces on Dynamic Pull-In Instability of Micro/Nano Bridges. , 2010, , .		0
54	Comparison between two analytical techniques for simulating the pull-in behavior of nano-structures. , 2012, , .		0

#	Article	IF	Citations
55	Local Response of Actin Networks is Controlled by Tensile Strains in the Stress-Fibers: Insights From a Discrete Network Model. International Journal of Applied Mechanics, 2019, 11, 1950072.	1.3	0
56	DESIGN AND SIMULATION OF A NOVEL C-DEP MICROFLUIDICS FOR SINGLE CELL TRAPPING. Journal of Thermal Engineering, 2017, 3, 1319-1327.	0.8	0
57	Dynamics of Bacteria-Inspired Micro-Swimmers. Recent Patents on Mechanical Engineering, 2017, 10, .	0.2	0