

# Mahmoud Kadkhodaei

## List of Publications by Year in descending order

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93  
papers

1,958  
citations

257357

24  
h-index

289141

40  
g-index

95  
all docs

95  
docs citations

95  
times ranked

1574  
citing authors

#	ARTICLE	IF	CITATIONS
1	Meeting the Contact-Mechanics Challenge. Tribology Letters, 2017, 65, 1.	1.2	232
2	Numerical investigation on mechanical properties of cellular lattice structures fabricated by fused deposition modeling. International Journal of Mechanical Sciences, 2014, 88, 154-161.	3.6	219
3	Numerical investigation of the mechanical properties of the additive manufactured bone scaffolds fabricated by FDM: The effect of layer penetration and post-heating. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 59, 241-250.	1.5	110
4	Achieving biocompatible stiffness in NiTi through additive manufacturing. Journal of Intelligent Material Systems and Structures, 2016, 27, 2661-2671.	1.4	58
5	Buckling analysis of rectangular functionally graded plates under various edge conditions using Fourier series expansion. European Journal of Mechanics, A/Solids, 2013, 41, 16-27.	2.1	56
6	On the effects of geometry, defects, and material asymmetry on the mechanical response of shape memory alloy cellular lattice structures. Smart Materials and Structures, 2016, 25, 025008.	1.8	54
7	Slab analysis of asymmetrical sheet rolling. Journal of Materials Processing Technology, 2004, 150, 215-222.	3.1	52
8	3D phenomenological constitutive modeling of shape memory alloys based on microplane theory. Smart Materials and Structures, 2013, 22, 025017.	1.8	47
9	A Computationally Efficient Modeling Approach for Predicting Mechanical Behavior of Cellular Lattice Structures. Journal of Materials Engineering and Performance, 2015, 24, 245-252.	1.2	47
10	The Effect of Implant Thread Design on Stress Distribution in Anisotropic Bone with Different Osseointegration Conditions: A Finite Element Analysis. International Journal of Oral and Maxillofacial Implants, 2015, 30, 1317-1326.	0.6	39
11	Constitutive modeling of tension-torsion coupling and tension-compression asymmetry in NiTi shape memory alloys. Smart Materials and Structures, 2014, 23, 075021.	1.8	38
12	Investigation on the failure mechanism of triply periodic minimal surface cellular structures fabricated by Vat photopolymerization additive manufacturing under compressive loadings. Mechanics of Materials, 2020, 140, 103150.	1.7	38
13	A thermodynamically-consistent microplane model for shape memory alloys. International Journal of Solids and Structures, 2014, 51, 2666-2675.	1.3	36
14	Modeling of the cyclic thermomechanical response of SMA wires at different strain rates. Smart Materials and Structures, 2007, 16, 2091-2101.	1.8	33
15	Analysis of nonlinear free vibration and damping of a clamped-clamped beam with embedded prestrained shape memory alloy wires. Journal of Intelligent Material Systems and Structures, 2012, 23, 1107-1117.	1.4	32
16	A non-local implicit gradient-enhanced model for unstable behaviors of pseudoelastic shape memory alloys in tensile loading. International Journal of Solids and Structures, 2014, 51, 4015-4025.	1.3	30
17	Asymmetrical sheet rolling analysis and evaluation of developed curvature. International Journal of Advanced Manufacturing Technology, 2012, 61, 227-235.	1.5	29
18	Anisotropic behavior of superelastic NiTi shape memory alloys; an experimental investigation and constitutive modeling. Mechanics of Materials, 2014, 77, 110-124.	1.7	29

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19	Bending and buckling analysis of functionally graded annular microplate integrated with piezoelectric layers based on layerwise theory using DQM. <i>Aerospace Science and Technology</i> , 2018, 79, 679-688.	2.5	29
20	Asymmetrical rolling analysis of bonded two-layer sheets and evaluation of outgoing curvature. <i>International Journal of Advanced Manufacturing Technology</i> , 2014, 73, 521-533.	1.5	28
21	Microplane modeling of shape memory alloy tubes under tension, torsion, and proportional tension–torsion loading. <i>Journal of Intelligent Material Systems and Structures</i> , 2015, 26, 144-155.	1.4	28
22	Modeling the cyclic shape memory and superelasticity of selective laser melting fabricated NiTi. <i>International Journal of Mechanical Sciences</i> , 2018, 138-139, 54-61.	3.6	28
23	A microplane constitutive model for shape memory alloys considering tension–compression asymmetry. <i>Smart Materials and Structures</i> , 2015, 24, 075016.	1.8	26
24	Modeling of Shape Memory Alloys Based on Microplane Theory. <i>Journal of Intelligent Material Systems and Structures</i> , 2008, 19, 541-550.	1.4	25
25	Automatic segmentation of multimodal brain tumor images based on classification of super-voxels. , 2016, 2016, 5945-5948.		25
26	Design, analysis, and manufacture of a tension–compression self-centering damper based on energy dissipation of pre-stretched superelastic shape memory alloy wires. <i>Journal of Intelligent Material Systems and Structures</i> , 2017, 28, 2129-2139.	1.4	24
27	Microplane modelling of shape memory alloys. <i>Physica Scripta</i> , 2007, T129, 329-334.	1.2	22
28	Analysis of asymmetrical sheet rolling by a genetic algorithm. <i>International Journal of Mechanical Sciences</i> , 2007, 49, 622-634.	3.6	22
29	Experimental Study of NiTi Thin-Walled Tubes Under Uniaxial Tension, Torsion, Proportional and Non-Proportional Loadings. <i>Experimental Mechanics</i> , 2015, 55, 1151-1164.	1.1	22
30	Constitutive modeling of cyclic behavior in shape memory alloys. <i>International Journal of Mechanical Sciences</i> , 2015, 103, 181-188.	3.6	20
31	A chain link mandrel for rotary draw bending: experimental and finite element study of operation. <i>International Journal of Advanced Manufacturing Technology</i> , 2015, 79, 1071-1080.	1.5	19
32	A Unit Cell Model for Simulating The Stress-Strain Response of Porous Shape Memory Alloys. <i>Journal of Materials Engineering and Performance</i> , 2015, 24, 4096-4105.	1.2	19
33	Fabrication and modeling of shape memory alloy springs. <i>Smart Materials and Structures</i> , 2016, 25, 125003.	1.8	19
34	Experimental and numerical investigation on lattice structures fabricated by selective laser melting process under quasi-static and dynamic loadings. <i>International Journal of Advanced Manufacturing Technology</i> , 2021, 112, 2815-2836.	1.5	19
35	An investigation into compressive responses of shape memory polymeric cellular lattice structures fabricated by vat polymerization additive manufacturing. <i>Polymer Testing</i> , 2020, 91, 106832.	2.3	17
36	Finite element simulation of shape memory alloy wires using a user material subroutine: Parametric study on heating rate, conductivity, and heat convection. <i>Journal of Intelligent Material Systems and Structures</i> , 2015, 26, 554-572.	1.4	16

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37	Effects of asymmetric material response on the mechanical behavior of porous shape memory alloys. <i>Journal of Intelligent Material Systems and Structures</i> , 2016, 27, 1687-1701.	1.4	16
38	Mechanical characterization and finite element modeling of polylactic acid BCC-Z cellular lattice structures fabricated by fused deposition modeling. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2017, 231, 1995-2004.	1.1	16
39	Fatigue analysis of shape memory alloys by self-heating method. <i>International Journal of Mechanical Sciences</i> , 2019, 156, 329-341.	3.6	16
40	One dimensional constitutive model with transformation surfaces for phase transition in shape memory alloys considering the effect of loading history. <i>International Journal of Solids and Structures</i> , 2016, 81, 117-129.	1.3	15
41	Numerical and Experimental Investigation on Electro-Thermo-Mechanical Behavior of NiTi Shape Memory Alloy Wires. <i>Iranian Journal of Science and Technology - Transactions of Mechanical Engineering</i> , 2019, 43, 621-629.	0.8	15
42	A geometrical approach to determine reorientation start and continuation conditions in ferromagnetic shape memory alloys considering the effects of loading history. <i>Smart Materials and Structures</i> , 2014, 23, 125008.	1.8	14
43	An anisotropic gradient damage model based on microplane theory. <i>International Journal of Damage Mechanics</i> , 2016, 25, 336-357.	2.4	14
44	Numerical Implementation of a Thermomechanical Constitutive Model for Shape Memory Alloys Using Return Mapping Algorithm and Microplane Theory. <i>Advanced Materials Research</i> , 0, 516-517, 351-354.	0.3	13
45	Direct numerical determination of stabilized dissipated energy of shape memory alloys under cyclic tensile loadings. <i>Journal of Intelligent Material Systems and Structures</i> , 2015, 26, 2137-2150.	1.4	13
46	Slab Analysis of Asymmetrical Rolling of Bonded Two-layer Sheets. <i>ISIJ International</i> , 2013, 53, 265-273.	0.6	12
47	A modified constitutive model with an enhanced phase diagram for ferromagnetic shape memory alloys. <i>Journal of Intelligent Material Systems and Structures</i> , 2015, 26, 56-68.	1.4	12
48	Effect of loading history on phase transition and martensitic detwinning in shape memory alloys: Limitations of current approaches and development of a 1D constitutive model. <i>Journal of Alloys and Compounds</i> , 2017, 729, 390-406.	2.8	12
49	A Study on Fracture Locus of St12 Steel And Implementation Ductile Damage Criteria. , 2010, , .		11
50	Modeling of unstable behaviors of shape memory alloys during localization and propagation of phase transformation using a gradient-enhanced model. <i>Journal of Intelligent Material Systems and Structures</i> , 2015, 26, 2531-2546.	1.4	11
51	A comprehensive energy approach to predict fatigue life in CuAlBe shape memory alloy. <i>Smart Materials and Structures</i> , 2015, 24, 025004.	1.8	11
52	Numerical and clinical investigation on the material model of the cornea in Corvis tonometry tests: differentiation between hyperelasticity and viscoelasticity. <i>Mechanics of Time-Dependent Materials</i> , 2019, 23, 373-384.	2.3	11
53	An experimental study on a self-centering damper based on shape-memory alloy wires. <i>Mechanics Based Design of Structures and Machines</i> , 2023, 51, 3779-3802.	3.4	11
54	Modeling of torsion fatigue in shape memory alloys. <i>Journal of Intelligent Material Systems and Structures</i> , 2019, 30, 3146-3162.	1.4	10

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55	Fatigue analysis of shape memory alloy helical springs. International Journal of Mechanical Sciences, 2019, 161-162, 105059.	3.6	9
56	Thermomechanical Modeling of Stress Relaxation in Shape Memory Alloy Wires. Journal of Materials Engineering and Performance, 2015, 24, 1763-1770.	1.2	8
57	On the origin of residual strain in shape memory alloys: experimental investigation on evolutions in the microstructure of CuAlBe during complex thermomechanical loadings. Smart Materials and Structures, 2017, 26, 025024.	1.8	7
58	Finite Element Modeling of the Elastic Modulus of Ti6Al4V Scaffold Fabricated by SLM. , 2013, , .		6
59	Behaviors of Ferromagnetic Shape Memory Alloy Ni-Mn-Ga Under Incomplete Magneto-Mechanical Loading-Unloading Cycles. Advanced Engineering Materials, 2014, 16, 1362-1369.	1.6	6
60	Analysis of interfacial debonding in shape memory alloy wire-reinforced composites. Smart Materials and Structures, 2016, 25, 015032.	1.8	6
61	Rotary bending fatigue analysis of shape memory alloys. Journal of Intelligent Material Systems and Structures, 2018, 29, 1183-1195.	1.4	6
62	Stress raisers and fracture in shape memory alloys: review and ongoing challenges. Critical Reviews in Solid State and Materials Sciences, 2022, 47, 461-519.	6.8	6
63	A cycle-dependent phase diagram to investigate the thermomechanical behavior of shape memory alloy wires under cyclic loadings. Journal of Intelligent Material Systems and Structures, 2014, 25, 2060-2073.	1.4	5
64	Constitutive modeling of Ni-Mn-Ga ferromagnetic shape memory alloys under biaxial compression. Journal of Intelligent Material Systems and Structures, 2016, 27, 1547-1564.	1.4	5
65	Finite element simulation of ferromagnetic shape memory alloys using a revised constitutive model. Journal of Intelligent Material Systems and Structures, 2017, 28, 2853-2871.	1.4	5
66	Proposition of R-phase transformation strip in the phase diagram of Ni-Ti shape memory alloy using electromechanical experiments. Journal of Intelligent Material Systems and Structures, 2017, 28, 2757-2768.	1.4	5
67	Fully coupled thermomechanical modeling of shape memory alloys under multiaxial loadings and implementation by finite element method. Continuum Mechanics and Thermodynamics, 2019, 31, 1683-1698.	1.4	5
68	The effects of shape-setting on transformation temperatures of pseudoelastic shape memory alloy springs. Journal of Science: Advanced Materials and Devices, 2019, 4, 568-576.	1.5	5
69	A Modified Microplane Model Using Transformation Surfaces to Consider Loading History on Phase Transition in Shape Memory Alloys. , 2014, , .		4
70	Investigation of Dog-Bone Geometry for Simple Tensile Test of Pseudoelastic Shape Memory Alloys. Iranian Journal of Science and Technology - Transactions of Mechanical Engineering, 2016, 40, 337-345.	0.8	4
71	Thermomechanical modeling and experimental investigation of transformation-induced creep and stress relaxation in shape memory alloy wires. Journal of Intelligent Material Systems and Structures, 2017, 28, 923-933.	1.4	4
72	A non-local implicit gradient-enhanced model for thermomechanical behavior of shape memory alloys. Journal of Intelligent Material Systems and Structures, 2018, 29, 1818-1834.	1.4	4

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73	Phenomenological constitutive modeling of ferromagnetic shape memory alloys considering the effects of loading history on reorientation start conditions. <i>Continuum Mechanics and Thermodynamics</i> , 2019, 31, 1065-1085.	1.4	4
74	Wear in superelastic shape memory alloys: A thermomechanical analysis. <i>Wear</i> , 2022, 488-489, 204139.	1.5	4
75	New multi-pass hot channel section rolling design by the finite element method. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2013, 227, 2742-2750.	1.1	3
76	Investigation on local and global behaviors of pseudoelastic shape memory alloy wires in simple tensile test considering stress concentration of grippers. <i>Journal of Intelligent Material Systems and Structures</i> , 2016, 27, 221-232.	1.4	3
77	A Comparative Analysis on Two Types of Oral Implants, Boneâ€Level and Tissueâ€Level, with Different Cantilever Lengths of Fixed Prosthesis. <i>Journal of Prosthodontics</i> , 2017, 26, 289-295.	1.7	3
78	Effects of intracorneal ring segments implementation technique and design on corneal biomechanics and keratometry in a personalized computational analysis. <i>Scientific Reports</i> , 2021, 11, 14433.	1.6	3
79	An Investigation into the Simple Tensile Test of SMA Wires Considering Stress Concentration of Grippers. <i>Journal of Materials Engineering and Performance</i> , 2014, 23, 1114-1123.	1.2	2
80	Numerical and experimental study on the effect of considering plastic and elastoplastic deformation of each asperity in dry contact of rough surfaces. <i>Surface Topography: Metrology and Properties</i> , 2019, 7, 025021.	0.9	2
81	A mechanical contact model for superelastic shape memory alloys. <i>Journal of Intelligent Material Systems and Structures</i> , 2021, 32, 208-218.	1.4	2
82	Stress distribution in maxillary first molar periodontium using straight pull headgear with vertical and horizontal tubes: A finite element analysis. <i>Dental Research Journal</i> , 2017, 14, 117-124.	0.2	2
83	Assessment of corneal and fatty tissues biomechanical response in dynamic tonometry tests by using inverse models. <i>Acta of Bioengineering and Biomechanics</i> , 2018, 20, 39-48.	0.2	2
84	Stress distribution in maxillary first molar periodontium using straight pull headgear with vertical and horizontal tubes: A finite element analysis. <i>Dental Research Journal</i> , 2017, 14, 117.	0.2	2
85	Shape Memory Effect Behavior of NiTi Torque Tubes in Torsion. , 2012, , .		1
86	Micromechanical response analysis of Ti-Ni shape memory alloy undergoing martensitic reorientation and detwinning. <i>Physica B: Condensed Matter</i> , 2018, 548, 34-45.	1.3	1
87	Adjustment of the scan track spacing and linear input energy to fabricate dense, pseudoelastic Nitinol shape memory alloy parts by selective laser melting. <i>Journal of Intelligent Material Systems and Structures</i> , 2022, 33, 1719-1730.	1.4	1
88	Microplane Modeling of Shape Memory Alloys in an Alternative Formulation. , 2013, , .		0
89	An investigative study on the performance of twist roll machine in a continuous cold strip rolling mill. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2013, 227, 1633-1649.	1.1	0
90	Influence of Strain Rate on Stressâ€Strain Response of Niâ€Mnâ€Ga Ferromagnetic Shape Memory Alloy Single Crystals. <i>Iranian Journal of Science and Technology - Transactions of Mechanical Engineering</i> , 2017, 41, 265-268.	0.8	0

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91	Effects of intracorneal ring segments on the biomechanical response of the ectatic cornea to air-puff: A patient-specific numerical analysis. Mathematics and Mechanics of Solids, 0, , 108128652110255.	1.5	0
92	Microplane Modeling for Inelastic Responses of Shape Memory Alloys. Advanced Structured Materials, 2021, , 303-328.	0.3	0
93	A stochastic approach to estimate intraocular pressure and dynamic corneal responses of the cornea. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 130, 105210.	1.5	0