Reza Mirzaeifar

List of Publications by Year
in descending order

77	1,778	304743 22	302126 39
papers	citations	h-index	g-index

79	79	79	1703
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Effect of manufacturing parameters on mechanical properties of 316L stainless steel parts fabricated by selective laser melting: A computational framework. Materials and Design, 2016, 112, 328-338.	7.0	153
2	Spatter formation in selective laser melting process using multi-laser technology. Materials and Design, 2017, 131, 460-469.	7.0	134
3	A combined analytical, numerical, and experimental study of shape-memory-alloy helical springs. International Journal of Solids and Structures, 2011, 48, 611-624.	2.7	97
4	Expansion of circular tubes by rigid tubes as impact energy absorbers: experimental and theoretical investigation. International Journal of Crashworthiness, 2007, 12, 493-501.	1.9	79
5	Defect-Tolerant Bioinspired Hierarchical Composites: Simulation and Experiment. ACS Biomaterials Science and Engineering, 2015, 1, 295-304.	5.2	75
6	A study on the effect of energy input on spatter particles creation during selective laser melting process. Additive Manufacturing, 2018, 20, 33-43.	3.0	68
7	On superelastic bending of shape memory alloy beams. International Journal of Solids and Structures, 2013, 50, 1664-1680.	2.7	60
8	Exact solutions for pure torsion of shape memory alloy circular bars. Mechanics of Materials, 2010, 42, 797-806.	3.2	56
9	Bioinspired design of flexible armor based on chiton scales. Nature Communications, 2019, 10, 5413.	12.8	56
10	Structural transformations in NiTi shape memory alloy nanowires. Journal of Applied Physics, 2014, 115, .	2.5	54
11	Mesoscale mechanics of twisting carbon nanotube yarns. Nanoscale, 2015, 7, 5435-5445.	5.6	51
12	Analysis of the rate-dependent coupled thermo-mechanical response of shape memory alloy bars and wires in tension. Continuum Mechanics and Thermodynamics, 2011, 23, 363-385.	2.2	44
13	Micromechanics modeling of metallic alloys 3D printed by selective laser melting. Materials and Design, 2018, 137, 204-213.	7.0	44
14	Static and Dynamic Analysis of Thick Functionally Graded Plates with Piezoelectric Layers Using Layerwise Finite Element Model. Mechanics of Advanced Materials and Structures, 2009, 16, 561-575.	2.6	36
15	Focused ultrasound actuation of shape memory polymers; acoustic-thermoelastic modeling and testing. RSC Advances, 2017, 7, 45452-45469.	3.6	36
16	A micromechanical analysis of the coupled thermomechanical superelastic response of textured and untextured polycrystalline NiTi shape memory alloys. Acta Materialia, 2013, 61, 4542-4558.	7.9	33
17	Independent tuning of stiffness and toughness of additively manufactured titanium-polymer composites: Simulation, fabrication, and experimental studies. Journal of Materials Processing Technology, 2016, 238, 22-29.	6.3	33
18	Modeling of rolling contact fatigue in rails at the microstructural level. Wear, 2018, 406-407, 205-217.	3.1	30

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19	Three-dimensional study of rolling contact fatigue using crystal plasticity and cohesive zone method. International Journal of Fatigue, 2019, 128, 105208.	5.7	28
20	New insights into the collapsing of cylindrical thin-walled tubes under axial impact load. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2007, 221, 869-885.	2.1	27
21	A semi-analytic analysis of shape memory alloy thick-walled cylinders under internal pressure. Archive of Applied Mechanics, 2011, 81, 1093-1116.	2.2	26
22	Coupled thermo-mechanical analysis of shape memory alloy circular bars in pure torsion. International Journal of Non-Linear Mechanics, 2012, 47, 118-128.	2.6	23
23	Damage modeling of metallic alloys made by additive manufacturing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 743, 656-664.	5.6	23
24	Effect of interface configuration on the mechanical properties and dislocation mechanisms in metal graphene composites. Computational Materials Science, 2020, 178, 109621.	3.0	23
25	Tilt grain boundaries energy and structure in NiTi alloys. Computational Materials Science, 2017, 131, 108-119.	3.0	22
26	Shape memory alloy engine for high efficiency low-temperature gradient thermal to electrical conversion. Applied Energy, 2019, 251, 113277.	10.1	22
27	Experiment and non-local crystal plasticity finite element study of nanoindentation on Al-8Ce-10Mg alloy. International Journal of Solids and Structures, 2021, 233, 111233.	2.7	21
28	A new method for finding the firstâ€•and secondâ€•order eigenderivatives of asymmetric nonâ€•conservative systems with application to an FGM plate actively controlled by piezoelectric sensor/actuators. International Journal for Numerical Methods in Engineering, 2008, 75, 1492-1510.	2.8	20
29	Active control of natural frequencies of FGM plates by piezoelectric sensor/actuator pairs. Smart Materials and Structures, 2008, 17, 045003.	3.5	19
30	Dissipation of cavitation-induced shock waves energy through phase transformation in NiTi alloys. International Journal of Mechanical Sciences, 2018, 137, 304-314.	6.7	19
31	Generalized stacking fault energy and dislocation properties in NiTi shape memory alloys. Journal of Alloys and Compounds, 2017, 709, 72-81.	5.5	18
32	An investigation of intelligent tires using multiscale modeling of cord-rubber composites. Mechanics Based Design of Structures and Machines, 2018, 46, 168-183.	4.7	18
33	Tracking the origins of size dependency in the mechanical properties of polymeric nanofibers at the atomistic scale. Polymer, 2019, 175, 118-128.	3.8	17
34	Graphene-Nickel interaction in layered metal-matrix composites. Surface Science, 2019, 688, 1-6.	1.9	17
35	An investigation towards intelligent tyres using finite element analysis. International Journal of Pavement Engineering, 2020, 21, 311-321.	4.4	17
36	Ductile Shape-Memory Polymer Composite with Enhanced Shape Recovery Ability. ACS Applied Materials & Interfaces, 2020, 12, 58295-58300.	8.0	17

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37	Nonlinear finite element formulation for analyzing shape memory alloy cylindrical panels. Smart Materials and Structures, 2009, 18, 035002.	3.5	16
38	Deformation mechanisms of the subgranular cellular structures in selective laser melted 316L stainless steel. Mechanics of Materials, 2020, 148, 103478.	3.2	16
39	Modification of dynamic characteristics of FGM plates with integrated piezoelectric layers using first- and second-order approximations. International Journal for Numerical Methods in Engineering, 2007, 70, 1409-1429.	2.8	15
40	Selective laser melting of aluminum nano-powder particles, a molecular dynamics study. Additive Manufacturing, 2020, 35, 101272.	3.0	15
41	Nanocrystalline nickel-graphene nanoplatelets composite: Superior mechanical properties and mechanics of properties enhancement at the atomistic level. Physical Review Materials, 2017, 1, .	2.4	15
42	Damage diagnosis in intelligent tires using time-domain and frequency-domain analysis. Mechanics Based Design of Structures and Machines, 2019, 47, 54-66.	4.7	14
43	Tensile strength of carbyne chains in varied chemical environments and structural lengths. Nanotechnology, 2014, 25, 371001.	2.6	13
44	Tire health monitoring using the intelligent tire concept. Structural Health Monitoring, 2019, 18, 390-400.	7.5	13
45	Copper-graphene composites; developing the MEAM potential and investigating their mechanical properties. Computational Materials Science, 2021, 188, 110204.	3.0	12
46	An approximate method for simultaneous modification of natural frequencies and buckling loads of thin rectangular isotropic plates. Engineering Structures, 2009, 31, 208-215.	5.3	11
47	Energy dissipation of shock-generated stress waves through phase transformation and plastic deformation in NiTi alloys. Mechanics of Materials, 2019, 137, 103090.	3.2	11
48	A constriction channel analysis of astrocytoma stiffness and disease progression. Biomicrofluidics, 2021, 15, 024103.	2.4	11
49	Optimization of the Dynamic Characteristics of Composite Plates Using an Inverse Approach. Journal of Composite Materials, 2007, 41, 3091-3108.	2.4	10
50	Coupled modification of natural frequencies and buckling loads of composite cylindrical panels. International Journal of Mechanical Sciences, 2009, 51, 708-717.	6.7	8
51	A review of fatigue and fracture mechanics with a focus on rubber-based materials. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, 2019, 233, 1005-1019.	1.1	8
52	Interplay of Chain Orientation and Bond Length in Size Dependency of Mechanical Properties in Polystyrene Nanofibers. ACS Applied Polymer Materials, 2020, 2, 1664-1671.	4.4	8
53	Achieving multimodal locomotion by a crosslinked poly(ethylene-co-vinyl acetate)-based two-way shape memory polymer. Smart Materials and Structures, 2022, 31, 015034.	3.5	8
54	Multiscale mechanics of the lateral pressure effect on enhancing the load transfer between polymer coated CNTs. Nanoscale, 2017, 9, 5565-5576.	5.6	7

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55	Deformation mechanisms and defect tolerance in the microstructure of 3D-printed alloys. Journal of Materials Research, 2020, 35, 1984-1997.	2.6	7
56	Ultrasound actuated shape-memory polymer based drug delivery containers. , 2018, , .		7
57	Stress Wave and Phase Transformation Propagation at the Atomistic Scale in NiTi Shape Memory Alloys Subjected to Shock Loadings. Shape Memory and Superelasticity, 2018, 4, 435-449.	2.2	6
58	Interaction of high-intensity focused ultrasound with polymers at the atomistic scale. Nanotechnology, 2021, 32, 045707.	2.6	6
59	Finite Element Modeling of Selective Laser Melting 316L Stainless Steel Parts for Evaluating the Mechanical Properties. , 2016, , .		5
60	Ultrasound Actuation of Shape-Memory Polymer Filaments: Acoustic-Thermoelastic Modeling and Testing. , 2017, , .		4
61	Developing an experimental-computational framework to investigate the deformation mechanisms and mechanical properties of Al-8Ce-10Mg alloys at micro and macroscales. Materials Today Communications, 2021, 28, 102674.	1.9	4
62	Modeling, characterization and parametric identification of low velocity impact behavior of time-dependent hyper-viscoelastic sandwich panels. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, 2019, 233, 622-636.	1.1	3
63	Numerical Investigation of Scale Factor in Composites Applying Extended Finite Element Method. , 2016, , .		2
64	Computational Study of Fatigue in Sub-grain Microstructure of Additively Manufactured Alloys. Journal of Materials Engineering and Performance, 2020, 29, 4631-4640.	2.5	2
65	A New Method for Analyzing Thick Walled Shape Memory Alloy Cylinders Subjected to Internal Pressure. , 2009, , .		1
66	Modifying the Shear Buckling Loads of Metal Shear Walls for Improving Their Energy Absorption Capacity. Advances in Structural Engineering, 2011, 14, 1247-1257.	2.4	1
67	A closed-form solution for superelastic shape memory alloy beams subjected to bending. Proceedings of SPIE, 2012, , .	0.8	1
68	Computational investigation of deformation mechanisms at the atomistic scale of metallic glass-graphene composites (MGGCs). Journal of Applied Physics, 2021, 130, .	2.5	1
69	Modeling of NiTiHf using finite difference method. , 2018, , .		1
70	An Iterative Method for Large Modification of Vibration and Buckling Characteristics of Plates Simultaneously. , 2011, , .		0
71	A Simplified Constitutive Model for Simulating the Rate-Dependent Superelastic Shape Memory Alloys in Fast Loadings. , 2011, , .		0
72	Is the Stress Distribution Uniform in the Cross Section of SMA Bars Subjected to Uniaxial Loading? Is it Related to Rate Dependency?. , 2011, , .		0

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73	Exact Solution for Pure Torsion of SMA Curved Bars With Application to Analyzing SMA Helical Springs. , 2011, , .		0
74	Bending Analysis of Textured Polycrystalline Shape Memory Alloy Beams. , 2012, , .		0
75	A Multi-Scale Model for Bending Stiffness of CNT Strands in CNT Fibers. , 2017, , .		0
76	The optimal geometry of sub-grain microstructural features in 3D printed alloys for improving the strength and toughness. Engineering Research Express, 2020, 2, 015051.	1.6	0
77	Studying the Effect of Tangential Forces on Rolling Contact Fatigue in Rails Considering Microstructure. , 2019, , .		0