Theocharis Baxevanis

List of Publications by Year
in descending order

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71	1,102	471371	414303
papers	citations	17 h-index	32 g-index

72	72	72	698
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Review and perspectives: shape memory alloy composite systems. Acta Mechanica, 2015, 226, 3907-3960.	1.1	158
2	Finite element analysis of the plane strain crack-tip mechanical fields in pseudoelastic shape memory alloys. Smart Materials and Structures, 2012, 21, 094012.	1.8	61
3	Compaction bands and induced permeability reduction in Tuffeau de Maastricht calcarenite. Acta Geotechnica, 2006, 1, 123-135.	2.9	60
4	On the fracture toughness enhancement due to stress-induced phase transformation in shape memory alloys. International Journal of Plasticity, 2013, 50, 158-169.	4.1	59
5	Fracture mechanics of shape memory alloys: review and perspectives. International Journal of Fracture, 2015, 191, 191-213.	1.1	54
6	A mode I fracture analysis of a center-cracked infinite shape memory alloy plate under plane stress. International Journal of Fracture, 2012, 175, 151-166.	1.1	50
7	Finite strain constitutive modeling for shape memory alloys considering transformation-induced plasticity and two-way shape memory effect. International Journal of Solids and Structures, 2021, 221, 42-59.	1.3	46
8	Actuation fatigue life prediction of shape memory alloys under the constant-stress loading condition. Scripta Materialia, 2015, 95, 58-61.	2.6	43
9	Fracture toughness of NiTiâ€“Towards establishing standard test methods for phase transforming materials. Acta Materialia, 2019, 162, 226-238.	3.8	42
10	On the driving force for crack growth during thermal actuation of shape memory alloys. Journal of the Mechanics and Physics of Solids, 2016, 89, 255-271.	2.3	38
11	A three-dimensional constitutive model for the martensitic transformation in polycrystalline shape memory alloys under large deformation. Smart Materials and Structures, 2019, 28, 074004.	1.8	34
12	On the Fracture Toughness of Pseudoelastic Shape Memory Alloys. Journal of Applied Mechanics, Transactions ASME, 2014, 81, .	1.1	33
13	Homogenization of elastoplastic composites with generalized periodicity in the microstructure. International Journal of Plasticity, 2013, 51, 161-187.	4.1	30
14	A phase-field model for low-cycle fatigue of brittle materials. International Journal of Fatigue, 2021, 150, 106297.	2.8	28
15	On the fracture toughness and stable crack growth in shape memory alloy actuators in the presence of transformation-induced plasticity. International Journal of Fracture, 2018, 209, 117-130.	1.1	27
16	Micromechanics of precipitated near-equiatomic Ni-rich NiTi shape memory alloys. Acta Mechanica, 2014, 225, 1167-1185.	1.1	26
17	Stable Crack Growth During Thermal Actuation of Shape Memory Alloys. Shape Memory and Superelasticity, 2016, 2, 104-113.	1.1	24
18	A finite strain thermomechanically-coupled constitutive model for phase transformation and (transformation-induced) plastic deformation in NiTi single crystals. International Journal of Plasticity, 2021, 139, 102957.	4.1	18

#	Article	IF	Citations
19	Thermomechanical failure response of notched NiTi coupons. International Journal of Solids and Structures, 2017, 125, 265-275.	1.3	17
20	On the Effect of Latent Heat on the Fracture Toughness of Pseudoelastic Shape Memory Alloys. Journal of Applied Mechanics, Transactions ASME, 2014, 81, .	1.1	16
21	Stable crack growth in NiTi shape memory alloys: 3D finite element modeling and experimental validation. Smart Materials and Structures, 2019, 28, 064001.	1.8	16
22	A micromechanically based model for damage-enhanced creep-rupture in continuous fiber-reinforced ceramic matrix composites. Mechanics of Materials, 2010, 42, 570-580.	1.7	14
23	A unified description of mechanical and actuation fatigue crack growth in shape memory alloys. Acta Materialia, 2021, 217, 117155.	3.8	14
24	Adiabatic shearing of non-homogeneous thermoviscoplastic materials. International Journal of Plasticity, 2004, 20, 899-914.	4.1	13
25	Load capacity and rupture displacement in viscoelastic fiber bundles. Physical Review E, 2007, 75, 046104.	0.8	12
26	Ni-Ti Shape Memory Alloy Coatings for Structural Applications: Optimization of HVOF Spraying Parameters. Advances in Materials Science and Engineering, 2018, 2018, 1-10.	1.0	12
27	An Extended Three-Dimensional Finite Strain Constitutive Model for Shape Memory Alloys. Journal of Applied Mechanics, Transactions ASME, 2021, 88, .	1.1	12
28	Structural fatigue and fracture of shape memory alloy actuators: Current status and perspectives. Journal of Intelligent Material Systems and Structures, 2022, 33, 1475-1486.	1.4	10
29	A Finite Strain Constitutive Model for Martensitic Transformation in Shape Memory Alloys Based on Logarithmic Strain. , 2017, , .		8
30	Predictive Modeling of the Constitutive Response of Precipitation Hardened Ni-Rich NiTi. Shape Memory and Superelasticity, 2017, 3, 9-23.	1.1	8
31	A numerical study of â€œfunctional fatigueâ€•of closed-cell NiTi shape memory foams. Mechanics of Materials, 2019, 131, 11-21.	1.7	8
32	Notes on the experimental measurement of fracture toughness of shape memory alloys. Journal of Intelligent Material Systems and Structures, 2020, 31, 475-483.	1.4	7
33	Actuation-Induced stable crack growth in near-equiatomic nickel-titanium shape memory alloys: Experimental and numerical analysis. International Journal of Solids and Structures, 2021, 221, 165-179.	1.3	7
34	Interface crack propagation in porous and time-dependent materials analyzed with discrete models. International Journal of Fracture, 2006, 141, 561-571.	1.1	6
35	ADAPTIVE FINITE ELEMENT COMPUTATIONS OF SHEAR BAND FORMATION. Mathematical Models and Methods in Applied Sciences, 2010, 20, 423-448.	1.7	6
36	On the fracture response of shape memory alloys by void growth and coalescence. Mechanics of Materials, 2021, 153, 103682.	1.7	6

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37	Experimental observations of â€œreversibleâ€•transformation toughening. Scripta Materialia, 2021, 191, 81-85.	2.6	6
38	Scaling of the size and temporal occurrence of burst sequences in creep rupture of fiber bundles. European Physical Journal B, 2008, 61, 153-157.	0.6	5
39	On the effect of fiber creep-compliance in the high-temperature deformation of continuous fiber-reinforced ceramic matrix composites. International Journal of Solids and Structures, 2010, 47, 2487-2497.	1.3	5
40	On the Experimental Evaluation of the Fracture Toughness of Shape Memory Alloys. Minerals, Metals and Materials Series, 2018, , 565-573.	0.3	5
41	A Three-Dimensional Constitutive Model for Polycrystalline Shape Memory Alloys Under Large Strains Combined With Large Rotations. , 2018, , .		5
42	A Three-Dimensional Constitutive Modeling for Shape Memory Alloys Considering Two-Way Shape Memory Effect and Transformation-Induced Plasticity. , 2019, , .		5
43	A Top-Down Characterization of NiTi Single-Crystal Inelastic Properties within Confidence Bounds through Bayesian Inference. Shape Memory and Superelasticity, 2021, 7, 50-64.	1.1	5
44	Stable crack growth during actuation in shape memory alloys. Proceedings of SPIE, 2014, , .	0.8	4
45	Actuation Fatigue Life Prediction of Notched Shape Memory Alloy Members. Journal of Applied Mechanics, Transactions ASME, 2019, 86, .	1.1	4
46	Tailoring the anisotropic (positive/zero/negative) thermal expansion in shape memory alloys through phase transformation and martensite (re)orientation. International Journal of Engineering Science, 2022, 177, 103687.	2.7	4
47	Bifurcation and creep effects in a viscoelastic non-local damageable continuum. European Journal of Mechanics, A/Solids, 2008, 27, 548-563.	2.1	3
48	A coarse-grained model of thermally activated damage in heterogeneous media: Time evolution of the creep rate. Europhysics Letters, 2008, 83, 46004.	0.7	3
49	Predicting the constitutive response of precipitation hardened NiTiHf. , 2017, , .		3
50	The role of material non-homogeneities on the formation and evolution of strain non-uniformities in thermoviscoplastic shearing. Quarterly of Applied Mathematics, 2004, 62, 97-116.	0.5	3
51	Experimental and numerical investigation of the stable crack growth regime under pseudoelastic loading in shape memory alloys. , 2018, , .		3
52	Fracture resistance of shape memory alloys under thermomechanical loading. Engineering Fracture Mechanics, 2021, 258, 108059.	2.0	3
53	Burst avalanches and inter-occurrence times in creep rupture. Europhysics Letters, 2008, 81, 24001.	0.7	2
54	Fracture toughness of shape memory alloy actuators: effect of transformation-induced plasticity. Proceedings of SPIE, 2016, , .	0.8	2

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55	Estimation of base settlement from the surface subsidence profile: Plane-field of displacements. International Journal for Numerical and Analytical Methods in Geomechanics, 2009, 33, 1109-1121.	1.7	1
56	Numerical Evaluation of the Effect of Ni4Ti3 Precipitates on the Overall Thermo-Mechanical Response of NiTi Shape Memory Alloys. , 2013, , .		1
57	On the Energy Release Rate During Global Thermo-Mechanically-Induced Phase Transformation in Shape Memory Alloys. , 2013, , .		1
58	Finite Element Analysis of Precipitation Effects on Ni-Rich NiTi Shape Memory Alloy Response. Materials Science Forum, 0, 792, 65-71.	0.3	1
59	Thermodynamically Consistent Thermomechanical Modeling of Kinetics of Macroscopic Phase Transition in SMA Using Phase Field Theory. , 2014, , .		1
60	Effect of Triaxiality on Phase Transformation in NI50.8TI Notched Cylindrical Bars. , 2017, , .		1
61	On the Fracture Response of Shape Memory Alloy Actuators. , 2015, , 165-180.		1
62	Constitutive response of precipitation hardened Ni-Ti-Hf shape memory alloys through micromechanical modeling. , 2018, , .		1
63	On the Path-Dependency of the J-Integral in a Pseudoelastic Shape Memory Alloy. , 2011, , .		0
64	Mode I Steady Crack-Growth in Superelastic Shape Memory Alloys. , 2012, , .		0
65	A Finite Element Study of Stable Crack-Growth in Superelastic Shape Memory Alloys. , 2012, , .		0
66	On the Thermomechanical Behavior of Ni60Ti40 Coupons via High Performance Full Field Experiments. , 2016, , .		0
67	Constitutive Modeling of Near-Equiatomic NiTi Shape Memory Alloys Considering Composition and Heat Treatment. Materials Science Forum, 0, 856, 78-84.	0.3	0
68	Micromechanical Modeling of Precipitation Hardened NiTiHf. Materials Science Forum, 0, 915, 147-156.	0.3	0
69	Special Issue Focus Mechanics and Physics of Active Materials and Systems. Shape Memory and Superelasticity, 2021, 7, 5-6.	1.1	0
70	Full-Field Micromechanics of Precipitated Shape Memory Alloys. , 2018, , 225-255.		0
71	Compactive Cataclastic Flow in Tuffeau de Maastricht Calcarenite: Mechanical Deformation & Permeability Reduction. , 2007, , 95-126.		0