

Theocharis Baxevanis

List of Publications by Year in descending order

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71
papers

1,102
citations

471371

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all docs

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docs citations

72
times ranked

698
citing authors

#	ARTICLE	IF	CITATIONS
1	Structural fatigue and fracture of shape memory alloy actuators: Current status and perspectives. <i>Journal of Intelligent Material Systems and Structures</i> , 2022, 33, 1475-1486.	1.4	10
2	Tailoring the anisotropic (positive/zero/negative) thermal expansion in shape memory alloys through phase transformation and martensite (re)orientation. <i>International Journal of Engineering Science</i> , 2022, 177, 103687.	2.7	4
3	Finite strain constitutive modeling for shape memory alloys considering transformation-induced plasticity and two-way shape memory effect. <i>International Journal of Solids and Structures</i> , 2021, 221, 42-59.	1.3	46
4	Actuation-Induced stable crack growth in near-equiatomic nickel-titanium shape memory alloys: Experimental and numerical analysis. <i>International Journal of Solids and Structures</i> , 2021, 221, 165-179.	1.3	7
5	On the fracture response of shape memory alloys by void growth and coalescence. <i>Mechanics of Materials</i> , 2021, 153, 103682.	1.7	6
6	Experimental observations of reversible transformation toughening. <i>Scripta Materialia</i> , 2021, 191, 81-85.	2.6	6
7	Special Issue Focus Mechanics and Physics of Active Materials and Systems. <i>Shape Memory and Superelasticity</i> , 2021, 7, 5-6.	1.1	0
8	A Top-Down Characterization of NiTi Single-Crystal Inelastic Properties within Confidence Bounds through Bayesian Inference. <i>Shape Memory and Superelasticity</i> , 2021, 7, 50-64.	1.1	5
9	A finite strain thermomechanically-coupled constitutive model for phase transformation and (transformation-induced) plastic deformation in NiTi single crystals. <i>International Journal of Plasticity</i> , 2021, 139, 102957.	4.1	18
10	An Extended Three-Dimensional Finite Strain Constitutive Model for Shape Memory Alloys. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2021, 88, .	1.1	12
11	A unified description of mechanical and actuation fatigue crack growth in shape memory alloys. <i>Acta Materialia</i> , 2021, 217, 117155.	3.8	14
12	A phase-field model for low-cycle fatigue of brittle materials. <i>International Journal of Fatigue</i> , 2021, 150, 106297.	2.8	28
13	Fracture resistance of shape memory alloys under thermomechanical loading. <i>Engineering Fracture Mechanics</i> , 2021, 258, 108059.	2.0	3
14	Notes on the experimental measurement of fracture toughness of shape memory alloys. <i>Journal of Intelligent Material Systems and Structures</i> , 2020, 31, 475-483.	1.4	7
15	A three-dimensional constitutive model for the martensitic transformation in polycrystalline shape memory alloys under large deformation. <i>Smart Materials and Structures</i> , 2019, 28, 074004.	1.8	34
16	Actuation Fatigue Life Prediction of Notched Shape Memory Alloy Members. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2019, 86, .	1.1	4
17	Stable crack growth in NiTi shape memory alloys: 3D finite element modeling and experimental validation. <i>Smart Materials and Structures</i> , 2019, 28, 064001.	1.8	16
18	A numerical study of functional fatigue of closed-cell NiTi shape memory foams. <i>Mechanics of Materials</i> , 2019, 131, 11-21.	1.7	8

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19	A Three-Dimensional Constitutive Modeling for Shape Memory Alloys Considering Two-Way Shape Memory Effect and Transformation-Induced Plasticity. , 2019, , .		5
20	Fracture toughness of NiTiâ€“Towards establishing standard test methods for phase transforming materials. Acta Materialia, 2019, 162, 226-238.	3.8	42
21	On the Experimental Evaluation of the Fracture Toughness of Shape Memory Alloys. Minerals, Metals and Materials Series, 2018, , 565-573.	0.3	5
22	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
23	A Three-Dimensional Constitutive Model for Polycrystalline Shape Memory Alloys Under Large Strains Combined With Large Rotations. , 2018, , .		5
24	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
25	Experimental and numerical investigation of the stable crack growth regime under pseudoelastic loading in shape memory alloys. , 2018, , .		3
26	Full-Field Micromechanics of Precipitated Shape Memory Alloys. , 2018, , 225-255.		0
27	Constitutive response of precipitation hardened Ni-Ti-Hf shape memory alloys through micromechanical modeling. , 2018, , .		1
28	A Finite Strain Constitutive Model for Martensitic Transformation in Shape Memory Alloys Based on Logarithmic Strain. , 2017, , .		8
29	Effect of Triaxiality on Phase Transformation in Ni50.8Ti Notched Cylindrical Bars. , 2017, , .		1
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	Predicting the constitutive response of precipitation hardened NiTiHf. , 2017, , .		3
32	Thermomechanical failure response of notched NiTi coupons. International Journal of Solids and Structures, 2017, 125, 265-275.	1.3	17
33	On the Thermomechanical Behavior of Ni60Ti40 Coupons via High Performance Full Field Experiments. , 2016, , .		0
34	Fracture toughness of shape memory alloy actuators: effect of transformation-induced plasticity. Proceedings of SPIE, 2016, , .	0.8	2
35	Stable Crack Growth During Thermal Actuation of Shape Memory Alloys. Shape Memory and Superelasticity, 2016, 2, 104-113.	1.1	24
36	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

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37	Fracture mechanics of shape memory alloys: review and perspectives. International Journal of Fracture, 2015, 191, 191-213.	1.1	54
38	Review and perspectives: shape memory alloy composite systems. Acta Mechanica, 2015, 226, 3907-3960.	1.1	158
39	Actuation fatigue life prediction of shape memory alloys under the constant-stress loading condition. Scripta Materialia, 2015, 95, 58-61.	2.6	43
40	On the Fracture Response of Shape Memory Alloy Actuators. , 2015, , 165-180.		1
41	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
42	On the Fracture Toughness of Pseudoelastic Shape Memory Alloys. Journal of Applied Mechanics, Transactions ASME, 2014, 81, .	1.1	33
43	Thermodynamically Consistent Thermomechanical Modeling of Kinetics of Macroscopic Phase Transition in SMA Using Phase Field Theory. , 2014, , .		1
44	Micromechanics of precipitated near-equiatomic Ni-rich NiTi shape memory alloys. Acta Mechanica, 2014, 225, 1167-1185.	1.1	26
45	Stable crack growth during actuation in shape memory alloys. Proceedings of SPIE, 2014, , .	0.8	4
46	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
47	Homogenization of elastoplastic composites with generalized periodicity in the microstructure. International Journal of Plasticity, 2013, 51, 161-187.	4.1	30
48	Numerical Evaluation of the Effect of Ni ₄ Ti ₃ Precipitates on the Overall Thermo-Mechanical Response of NiTi Shape Memory Alloys. , 2013, , .		1
49	On the Energy Release Rate During Global Thermo-Mechanically-Induced Phase Transformation in Shape Memory Alloys. , 2013, , .		1
50	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
51	Mode I Steady Crack-Growth in Superelastic Shape Memory Alloys. , 2012, , .		0
52	A Finite Element Study of Stable Crack-Growth in Superelastic Shape Memory Alloys. , 2012, , .		0
53	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
54	On the Path-Dependency of the J-Integral in a Pseudoelastic Shape Memory Alloy. , 2011, , .		0

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55	A micromechanically based model for damage-enhanced creep-rupture in continuous fiber-reinforced ceramic matrix composites. <i>Mechanics of Materials</i> , 2010, 42, 570-580.	1.7	14
56	On the effect of fiber creep-compliance in the high-temperature deformation of continuous fiber-reinforced ceramic matrix composites. <i>International Journal of Solids and Structures</i> , 2010, 47, 2487-2497.	1.3	5
57	ADAPTIVE FINITE ELEMENT COMPUTATIONS OF SHEAR BAND FORMATION. <i>Mathematical Models and Methods in Applied Sciences</i> , 2010, 20, 423-448.	1.7	6
58	Estimation of base settlement from the surface subsidence profile: Plane-field of displacements. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2009, 33, 1109-1121.	1.7	1
59	Bifurcation and creep effects in a viscoelastic non-local damageable continuum. <i>European Journal of Mechanics, A/Solids</i> , 2008, 27, 548-563.	2.1	3
60	Scaling of the size and temporal occurrence of burst sequences in creep rupture of fiber bundles. <i>European Physical Journal B</i> , 2008, 61, 153-157.	0.6	5
61	Burst avalanches and inter-occurrence times in creep rupture. <i>Europhysics Letters</i> , 2008, 81, 24001.	0.7	2
62	A coarse-grained model of thermally activated damage in heterogeneous media: Time evolution of the creep rate. <i>Europhysics Letters</i> , 2008, 83, 46004.	0.7	3
63	Load capacity and rupture displacement in viscoelastic fiber bundles. <i>Physical Review E</i> , 2007, 75, 046104.	0.8	12
64	Compactive Cataclastic Flow in Tuffeau de Maastricht Calcarenite: Mechanical Deformation & Permeability Reduction. , 2007, , 95-126.		0
65	Interface crack propagation in porous and time-dependent materials analyzed with discrete models. <i>International Journal of Fracture</i> , 2006, 141, 561-571.	1.1	6
66	Compaction bands and induced permeability reduction in Tuffeau de Maastricht calcarenite. <i>Acta Geotechnica</i> , 2006, 1, 123-135.	2.9	60
67	Adiabatic shearing of non-homogeneous thermoviscoplastic materials. <i>International Journal of Plasticity</i> , 2004, 20, 899-914.	4.1	13
68	The role of material non-homogeneities on the formation and evolution of strain non-uniformities in thermoviscoplastic shearing. <i>Quarterly of Applied Mathematics</i> , 2004, 62, 97-116.	0.5	3
69	Finite Element Analysis of Precipitation Effects on Ni-Rich NiTi Shape Memory Alloy Response. <i>Materials Science Forum</i> , 0, 792, 65-71.	0.3	1
70	Constitutive Modeling of Near-Equiatomic NiTi Shape Memory Alloys Considering Composition and Heat Treatment. <i>Materials Science Forum</i> , 0, 856, 78-84.	0.3	0
71	Micromechanical Modeling of Precipitation Hardened NiTiHf. <i>Materials Science Forum</i> , 0, 915, 147-156.	0.3	0