Wael Zaki

List of Publications by Year
in descending order

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73 papers	2,099 citations	304602 22 h-index	233338 45 g-index
73 all docs	73 docs citations	73 times ranked	705 citing authors

#	Article	IF	Citations
1	A review of constitutive models and modeling techniques for shape memory alloys. International Journal of Plasticity, 2016, 76, 244-284.	4.1	267
2	A three-dimensional model of the thermomechanical behavior of shape memory alloys. Journal of the Mechanics and Physics of Solids, 2007, 55, 2455-2490.	2.3	209
3	A 3D model of the cyclic thermomechanical behavior of shape memory alloys. Journal of the Mechanics and Physics of Solids, 2007, 55, 2427-2454.	2.3	164
4	Thermomechanical coupling in shape memory alloys under cyclic loadings: Experimental analysis and constitutive modeling. International Journal of Plasticity, 2011, 27, 1959-1980.	4.1	144
5	A constitutive model for shape memory alloys accounting for thermomechanical coupling. International Journal of Plasticity, 2011, 27, 748-767.	4.1	143
6	Theoretical and numerical modeling of solidâ€“solid phase change: Application to the description of the thermomechanical behavior of shape memory alloys. International Journal of Plasticity, 2008, 24, 614-645.	4.1	82
7	Additive manufacturing of shape memory alloys: A review with emphasis on powder bed systems. Materials and Design, 2021, 204, 109654.	3.3	82
8	A review of modeling techniques for advanced effects in shape memory alloy behavior. Smart Materials and Structures, 2016, 25, 103001.	1.8	74
9	A thermomechanically coupled finite deformation constitutive model for shape memory alloys based on Hencky strain. International Journal of Engineering Science, 2017, 117, 51-77.	2.7	55
10	An efficient implementation for a model of martensite reorientation in martensitic shape memory alloys under multiaxial nonproportional loading. International Journal of Plasticity, 2012, 37, 72-94.	4.1	49
11	Cyclic behavior and energy approach to the fatigue of shape memory alloys. Journal of Mechanics of Materials and Structures, 2009, 4, 395-411.	0.4	48
12	An extension of the ZM model for shape memory alloys accounting for plastic deformation. Mechanics of Materials, 2010, 42, 266-274.	1.7	47
13	A 3D finite-strain-based constitutive model for shape memory alloys accounting for thermomechanical coupling and martensite reorientation. Smart Materials and Structures, 2017, 26, 065006.	1.8	44
14	Modeling Tensile-Compressive Asymmetry for Superelastic Shape Memory Alloys. Mechanics of Advanced Materials and Structures, 2011, 18, 559-564.	1.5	43
15	Time integration and assessment of a model for shape memory alloys considering multiaxial nonproportional loading cases. International Journal of Solids and Structures, 2015, 54, 82-99.	1.3	42
16	An approach to modeling tensileâ€“compressive asymmetry for martensitic shape memory alloys. Smart Materials and Structures, 2010, 19, 025009.	1.8	38
17	Modeling of steady-state crack growth in shape memory alloys using a stationary method. International Journal of Plasticity, 2015, 67, 26-38.	4.1	35
18	Analytical model of functionally graded material/shape memory alloy composite cantilever beam under bending. Composite Structures, 2018, 203, 764-776.	3.1	34

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19	Non-linear dynamic thermomechanical behaviour of shape memory alloys. Journal of Intelligent Material Systems and Structures, 2012, 23, 1593-1611.	1.4	30
20	Time integration of a model for martensite detwinning and reorientation under nonproportional loading using Lagrange multipliers. International Journal of Solids and Structures, 2012, 49, 2951-2961.	1.3	28
21	A nonlinear 3D model for iron-based shape memory alloys considering different thermomechanical properties for austenite and martensite and coupling between transformation and plasticity. Mechanics of Materials, 2017, 107, 1-21.	1.7	28
22	Free vibration and buckling characteristics of functionally graded beams with triply periodic minimal surface architecture. Composite Structures, 2021, 274, 114342.	3.1	27
23	An extended thermomechanically coupled 3D rate-dependent model for pseudoelastic SMAs under cyclic loading. Smart Materials and Structures, 2017, 26, 095047.	1.8	26
24	Direct Numerical Determination of the Asymptotic Cyclic Behavior of Pseudoelastic Shape Memory Structures. Journal of Engineering Mechanics - ASCE, 2011, 137, 497-503.	1.6	21
25	Optimal weaving for 2.5D interlocks. Composite Structures, 2011, 93, 1255-1264.	3.1	20
26	Analytical investigation of the behavior of concrete beams reinforced with multiple circular superelastic shape memory alloy bars. Composite Structures, 2019, 210, 958-970.	3.1	20
27	Mathematical model for superelastic shape memory alloy springs with large spring index. International Journal of Solids and Structures, 2020, 185-186, 159-169.	1.3	20
28	Mechanical attributes and wave propagation characteristics of TPMS lattice structures. Mechanics of Materials, 2022, 172, 104363.	1.7	20
29	Bending models for superelastic shape memory alloy laminated composite cantilever beams with elastic core layer. Composites Part B: Engineering, 2018, 147, 86-103.	5.9	19
30	Self-sensing shape memory polymer composites reinforced with functional textiles. Composites Science and Technology, 2022, 221, 109219.	3.8	19
31	Bending model for functionally graded porous shape memory alloy/poroelastic composite cantilever beams. Applied Mathematical Modelling, 2021, 97, 398-417.	2.2	17
32	Interlaminar shear stress function for adhesively bonded multi-layer metal laminates. International Journal of Adhesion and Adhesives, 2018, 82, 14-20.	1.4	15
33	A model for shape memory alloy beams accounting for tensile compressive asymmetry. Journal of Intelligent Material Systems and Structures, 2019, 30, 2697-2715.	1.4	15
34	Analytical model for a superelastic Timoshenko shape memory alloy beam subjected to a loadingâ€“unloading cycle. Journal of Intelligent Material Systems and Structures, 2018, 29, 3902-3922.	1.4	14
35	Bending model for a laminated composite cantilever beam with multiple embedded shape memory alloy layers presenting tensile-compressive asymmetry. Composite Structures, 2019, 229, 111410.	3.1	14
36	Bending theory for laminated composite cantilever beams with multiple embedded shape memory alloy layers. Journal of Intelligent Material Systems and Structures, 2019, 30, 1549-1568.	1.4	14

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37	Modeling of materials capable of solidâ€“solid phase transformation. Application to the analytical solution of the semi-infinite mode III crack problem in a phase-changing solid. International Journal of Non-Linear Mechanics, 2015, 69, 146-156.	1.4	12
38	Shakedown based model for high-cycle fatigue of shape memory alloys. Smart Materials and Structures, 2016, 25, 115012.	1.8	11
39	Free vibration characteristics of sectioned unidirectional/bidirectional functionally graded material cantilever beams based on finite element analysis. Applied Mathematics and Mechanics (English) Tj ETQq1 1 0.784314 rgBT /Overlock	3.4	10
40	Modeling bending behavior of shape memory alloy wire-reinforced composites: Semi-analytical model and finite element analysis. Chinese Journal of Aeronautics, 2021, 34, 176-191.	2.8	10
41	Analytical model for the torsional response of superelastic shape memory alloy circular sections subjected to a loading-unloading cycle. International Journal of Solids and Structures, 2019, 156-157, 49-60.	1.3	9
42	Effective stiffness, wave propagation, and yield surface attributes of Menger sponge-like pre-fractal topologies. International Journal of Mechanical Sciences, 2022, 227, 107447.	3.6	8
43	Modeling the behavior of bilayer shape memory alloy/functionally graded material beams considering asymmetric shape memory alloy response. Journal of Intelligent Material Systems and Structures, 2020, 31, 84-99.	1.4	7
44	Analytical investigation of an energy harvesting shape memory alloyâ€“piezoelectric beam. Archive of Applied Mechanics, 2020, 90, 2715-2738.	1.2	7
45	A thermomechanical constitutive model for porous SMAs accounting for the influence of void evolution. Mechanics of Materials, 2021, 155, 103779.	1.7	7
46	Analytical Model for a Superelastic SMA Beam. , 2017, , .		6
47	Mechanical Behavior of Shape-Memory Alloy Triply Periodic Minimal Surface Foam Based on Schwarz Primitive. Journal of Engineering Mechanics - ASCE, 2022, 148, .	1.6	5
48	Numerical simulation of pseudoelastic shape memory alloys using the large time increment method. Smart Materials and Structures, 2017, 26, 045016.	1.8	4
49	Numerical simulation of the behavior of steel T-stubs connected by Fe-based shape memory alloy bolts. Journal of Intelligent Material Systems and Structures, 2018, 29, 3284-3292.	1.4	4
50	Development and implementation of an effective constitutive model for architected cellular iron-based shape memory alloys: Pressure dependency and transformation-plasticity interaction. Journal of Intelligent Material Systems and Structures, 2019, 30, 1789-1822.	1.4	4
51	Behavior of composite pre-flat slabs in resisting punching shear forces. AEJ - Alexandria Engineering Journal, 2020, 59, 333-347.	3.4	4
52	A simple 1D model with thermomechanical coupling for superelastic SMAs. IOP Conference Series: Materials Science and Engineering, 2010, 10, 012149.	0.3	3
53	Time Integration and Assessment of a Model for Shape Memory Alloys Considering Multiaxial Nonproportional Loading Cases. , 2014, , .		2
54	High-Cycle Fatigue Criterion for Shape Memory Alloys Based on Shakedown Theory. , 2016, , .		2

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55	Postpartum Family Planning During Sociopolitical Transition: Findings from an Integrated Community-Based Program in Egypt. International Perspectives on Sexual and Reproductive Health, 2016, 42, 57.	3.8	2
56	Finite element analysis of a 3D Fe-based SMA cellular beam with highly heterogeneous stress and strain distributions. Proceedings of SPIE, 2017, , .	0.8	2
57	Analytical Model of Shape Memory Alloy Helical Springs. , 2018, , .		2
58	Development of a torsional theory for radially functionally graded porous shape memory alloy circular bars. Journal of Intelligent Material Systems and Structures, 2022, 33, 1374-1391.	1.4	2
59	Modeling and Simulation of the Mechanical Response of Martensitic Shape Memory Alloys. , 2011, , .		1
60	Steady State Crack Growth in Shape Memory Alloys. , 2013, , .		1
61	A Model for Iron-Based Shape Memory Alloys Considering Variable Elastic Stiffness and Coupling Between Plasticity and Phase Transformation. , 2015, , .		1
62	Mechanical factors in primary water stress corrosion cracking of cold-worked stainless steel. Nuclear Engineering and Design, 2016, 301, 24-31.	0.8	1
63	Modeling and Simulation of Architectured Iron-Based SMA Materials. , 2017, , .		1
64	A model for inter-laminar shear stress in laminated composites. Journal of Physics: Conference Series, 2017, 814, 012006.	0.3	1
65	ModÃ©lisation thermomÃ©canique des alliages Ã mÃ©moire de forme : gÃ©nÃ©ralisation de la loi Moumni-Son. European Physical Journal Special Topics, 2005, 124, 237-242.	0.2	1
66	Analytical model for a laminated shape memory alloy beam with piezoelectric layers. , 2018, , .		1
67	Numerical model for an epoxy beam reinforced with superelastic shape memory alloy wires. , 2018, , .		1
68	Implementation of the Large Time Increment Method for the Simulation of Pseudoelastic Shape Memory Alloys. , 2015, , .		0
69	Modeling framework for materials capable of solid-solid phase transformation: application to the analytical solution of the semi-infinite mode III crack problem in an idealized shape memory alloy. , 2015, , .		0
70	Analytical Model for a Functionally Graded Material/Shape Memory Alloy Laminated Composite Cantilever Beam. , 2018, , .		0
71	A Model for FGM/SMA Bilayer Beams Accounting for Asymmetric SMA Behavior. IOP Conference Series: Materials Science and Engineering, 2020, 855, 012011.	0.3	0
72	Theoretical model for laminated composite beam consisting of multiple superelastic shape memory alloy layers. , 2019, , .		0

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73	An analytical model for a shape memory alloy beam accounting for tension-compression stress asymmetry effect. , 2019, , .		0