

Tarak Ben Zineb

List of Publications by Year in descending order

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102
papers

2,147
citations

218592

26
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243529

44
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103
all docs

103
docs citations

103
times ranked

1173
citing authors

#	ARTICLE	IF	CITATIONS
1	Characterization of Iron-Based Shape Memory Alloys Using the Small Punch Test. <i>Materials Performance and Characterization</i> , 2022, 11, 335-350.	0.2	0
2	Hybrid composites with shape memory alloys and piezoelectric thin layers. , 2022, , 225-265.		1
3	Recent advances in flexible PVDF based piezoelectric polymer devices for energy harvesting applications. <i>Journal of Intelligent Material Systems and Structures</i> , 2021, 32, 746-780.	1.4	103
4	Plasticized P($\text{VDF}_{\text{a}}\text{TrFE}_{\text{c}}$): A new flexible piezoelectric material with an easier polarization process, promising for biomedical applications. <i>Journal of Applied Polymer Science</i> , 2021, 138, 50420.	1.3	4
5	Finite element and experimental structural analysis of endodontic rotary file made of Cu-based single crystal SMA considering a micromechanical behavior model. <i>International Journal of Solids and Structures</i> , 2021, 221, 180-196.	1.3	4
6	Modeling of Iron Based Shape Memory Alloys Behavior Within Finite Strain Formulation. <i>Lecture Notes in Mechanical Engineering</i> , 2021, , 385-391.	0.3	0
7	A finite-strain thermomechanical behavior model for iron-based shape memory alloys accounting for coupling between phase transformation and plastic slip. <i>International Journal of Plasticity</i> , 2020, 124, 96-116.	4.1	10
8	Experimental analysis of the pseudoelastic damping capacity of the Fe-30Mn-6Si-5Cr Shape Memory Alloy. <i>Smart Materials and Structures</i> , 2020, 29, 084002.	1.8	4
9	Combined bending-torsion testing device for characterization of shape memory alloy endodontic files. <i>Journal of Intelligent Material Systems and Structures</i> , 2020, 31, 1763-1781.	1.4	4
10	Data-driven multiscale finite element method: From concurrence to separation. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 363, 112893.	3.4	65
11	Modeling of Hydrogen Effects on the Thermomechanical Behavior of NiTi-Based Shape Memory Alloys. <i>Shape Memory and Superelasticity</i> , 2019, 5, 206-217.	1.1	5
12	Large amplitude free flexural vibrations of functionally graded graphene platelets reinforced porous composite curved beams using finite element based on trigonometric shear deformation theory. <i>International Journal of Non-Linear Mechanics</i> , 2019, 116, 302-317.	1.4	39
13	Development and implementation of an effective constitutive model for architected cellular iron-based shape memory alloys: Pressure dependency and transformation-plasticity interaction. <i>Journal of Intelligent Material Systems and Structures</i> , 2019, 30, 1789-1822.	1.4	4
14	3D reconstitution and numerical analysis of superelastic behavior of porous shape memory alloy. <i>International Journal of Solids and Structures</i> , 2019, 168, 109-122.	1.3	9
15	A Fourier-related FE2 multiscale model for instability phenomena of long fiber reinforced materials. <i>Composite Structures</i> , 2019, 211, 530-539.	3.1	28
16	Uncertainty analysis of an actuator for a shape memory alloy micro-pump with uncertain parameters. <i>Advances in Engineering Software</i> , 2018, 122, 22-30.	1.8	12
17	Numerical simulation of the force generated by a superelastic NiTi orthodontic archwire during tooth alignment phase: comparison between different constitutive models. <i>Materials Research Express</i> , 2018, 5, 045405.	0.8	13
18	A Multiscale Analysis on the Superelasticity Behavior of Architected Shape Memory Alloy Materials. <i>Materials</i> , 2018, 11, 1746.	1.3	13

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19	3D modeling of shape memory alloy fiber reinforced composites by multiscale finite element method. <i>Composite Structures</i> , 2018, 200, 408-419.	3.1	51
20	Numerical simulation of the behavior of steel T-stubs connected by Fe-based shape memory alloy bolts. <i>Journal of Intelligent Material Systems and Structures</i> , 2018, 29, 3284-3292.	1.4	4
21	Experimental Observations and Modeling of Localization in Superelastic NiTi Polycrystalline Alloys: State of the Art. <i>Acta Physica Polonica A</i> , 2018, 134, 847-852.	0.2	4
22	A nonlinear 3D model for iron-based shape memory alloys considering different thermomechanical properties for austenite and martensite and coupling between transformation and plasticity. <i>Mechanics of Materials</i> , 2017, 107, 1-21.	1.7	28
23	Experimental and numerical analysis of penetration/removal response of endodontic instrument made of single crystal Cu-based SMA: comparison with NiTi SMA instruments. <i>Smart Materials and Structures</i> , 2017, 26, 045014.	1.8	9
24	Finite element analysis of a 3D Fe-based SMA cellular beam with highly heterogeneous stress and strain distributions. <i>Proceedings of SPIE</i> , 2017, , .	0.8	2
25	Modeling and Simulation of Architected Iron-Based SMA Materials. , 2017, , .		1
26	Modeling of latent heat effects on phase transformation in shape memory alloy thin structures. <i>International Journal of Solids and Structures</i> , 2016, 88-89, 283-295.	1.3	24
27	Finite element analysis of switching domains using ferroelectric and ferroelastic micromechanical model for single crystal piezoceramics. <i>Ceramics International</i> , 2016, 42, 11224-11238.	2.3	8
28	A review of modeling techniques for advanced effects in shape memory alloy behavior. <i>Smart Materials and Structures</i> , 2016, 25, 103001.	1.8	74
29	Modeling of hydrogen effect on the superelastic behavior of Ni-Ti shape memory alloy wires. <i>Smart Materials and Structures</i> , 2016, 25, 115047.	1.8	12
30	Dynamic snap-through buckling of CNT reinforced composite sandwich spherical caps. <i>Composites Part B: Engineering</i> , 2016, 99, 472-482.	5.9	19
31	A review of constitutive models and modeling techniques for shape memory alloys. <i>International Journal of Plasticity</i> , 2016, 76, 244-284.	4.1	267
32	A Model for Iron-Based Shape Memory Alloys Considering Variable Elastic Stiffness and Coupling Between Plasticity and Phase Transformation. , 2015, , .		1
33	Investigation of supersonic flutter of thick doubly curved sandwich panels with CNT reinforced facesheets using higher-order structural theory. <i>Composite Structures</i> , 2015, 127, 340-355.	3.1	33
34	Finite Element Analysis of a Copper Single Crystal Shape Memory Alloy-Based Endodontic Instruments. <i>Journal of Materials Engineering and Performance</i> , 2015, 24, 4128-4139.	1.2	6
35	A 2D finite element based on a nonlocal constitutive model describing localization and propagation of phase transformation in shape memory alloy thin structures. <i>International Journal of Solids and Structures</i> , 2014, 51, 1208-1220.	1.3	31
36	Development of a constitutive hyperelastic material law for numerical simulations of adhesive steel-glass connections using structural silicone. <i>International Journal of Adhesion and Adhesives</i> , 2014, 48, 194-209.	1.4	33

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37	Numerical study of the influence of material parameters on the mechanical behaviour of a rehabilitated edentulous mandible. Journal of Dentistry, 2014, 42, 287-297.	1.7	11
38	Hydrogen effect on the austenite→martensite transformation of the cycled Ni-Ti alloy. Journal of Intelligent Material Systems and Structures, 2014, 25, 980-988.	1.4	22
39	Experimental and finite element analysis of superelastic behaviour of shape memory alloy for damping applications. Mechanics and Industry, 2014, 15, 371-376.	0.5	7
40	Experimental analysis of Fe-based shape memory alloy behavior under thermomechanical cyclic loading. Mechanics of Materials, 2013, 63, 1-11.	1.7	34
41	Enrichment of linear hexahedral finite elements using rotations of a virtual space fiber. International Journal for Numerical Methods in Engineering, 2013, 95, 46-70.	1.5	13
42	Modeling of the Martensite Transformation and Reorientation in SMA under Thermomechanical Loading. Design of Finite Element Adaptative Micro-Components. , 2013, , 677-682.		0
43	Effect of Microstructural and Physical Mechanisms on Mechanical Properties of Single-Phase Steels. Advanced Science Letters, 2013, 19, 346-350.	0.2	0
44	Development of a 2-D Interfacial Dynamic Model for Detwinning in HTSMAs. , 2013, , .		0
45	A finite element→based numerical tool for Ni ₄₇ Ti ₄₄ Nb ₉ SMA structures design: Application to tightening rings. Journal of Intelligent Material Systems and Structures, 2012, 23, 141-153.	1.4	22
46	Remeshing procedure for discrete membrane finite element: application to woven composite forming. European Journal of Computational Mechanics, 2012, 21, 4-21.	0.6	2
47	Thermomechanical model for NiTi-based shape memory alloys including R-phase and material anisotropy under multi-axial loadings. International Journal of Plasticity, 2012, 39, 132-151.	4.1	153
48	Finite Element analysis of a shape memory alloy actuator for a micropump. Simulation Modelling Practice and Theory, 2012, 27, 112-126.	2.2	39
49	Special finite elements for advanced modelling of engineering problems. European Journal of Computational Mechanics, 2012, 21, 1-3.	0.6	0
50	Modeling of niobium precipitates effect on the Ni ₄₇ Ti ₄₄ Nb ₉ Shape Memory Alloy behavior. International Journal of Plasticity, 2012, 36, 130-147.	4.1	32
51	Simulation of the effect of elastic precipitates in SMA materials based on a micromechanical model. Composites Part B: Engineering, 2012, 43, 2560-2576.	5.9	19
52	A constitutive model for Fe-based shape memory alloy considering martensitic transformation and plastic sliding coupling: Application to a finite element structural analysis. Journal of Intelligent Material Systems and Structures, 2012, 23, 1143-1160.	1.4	27
53	A piezoelectric 3D hexahedral curvilinear finite element based on the space fiber rotation concept. International Journal for Numerical Methods in Engineering, 2012, 90, 87-115.	1.5	9
54	Impact of intragranular microstructure development on ductility limits of multiphase steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 3777-3785.	2.6	6

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55	A ferroelectric and ferroelastic 3D hexahedral curvilinear finite element. International Journal of Solids and Structures, 2011, 48, 87-109.	1.3	15
56	Modelling of localization and propagation of phase transformation in superelastic SMA by a gradient nonlocal approach. International Journal of Solids and Structures, 2011, 48, 1879-1893.	1.3	54
57	Constitutive model for shape memory alloys including phase transformation, martensitic reorientation and twins accommodation. Mechanics of Materials, 2011, 43, 361-376.	1.7	159
58	Effect of hydrogen on the tensile strength of aged NiTi superelastic alloy. Journal of Intelligent Material Systems and Structures, 2011, 22, 2053-2059.	1.4	36
59	Improvement of a four-implant retained bridge for totally edentulous patients. Computer Methods in Biomechanics and Biomedical Engineering, 2011, 14, 147-148.	0.9	0
60	Thermomechanical Models for NiTi Shape Memory Alloys and Their Applications. , 2010, , .		0
61	Coupling between measured kinematic fields and multicrystal SMA finite element calculations. Mechanics of Materials, 2010, 42, 72-95.	1.7	35
62	Evaluation of the immediate post-operative bone-implant condition of a proximal interphalangeal joint prosthesis by a comparative FEA modeling. International Journal on Interactive Design and Manufacturing, 2010, 4, 157-167.	1.3	3
63	Measurement of local strain heterogeneities in superelastic shape memory alloys by digital image correlation. Physics Procedia, 2010, 10, 4-10.	1.2	6
64	Experimental and numerical analysis of recovery stress in $\langle \mathbf{si} \cdot \mathbf{1} \cdot \mathbf{g} \cdot \mathbf{i} \cdot \mathbf{f} \rangle$ display="inline" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/co	1.2	5
65	Modeling of SMA superelastic behavior with nonlocal approach. Physics Procedia, 2010, 10, 33-38.	1.2	9
66	Égalité des chances en École d'Ingénieur : Retour sur 11 années d'expérimentation à J3eA, 2010, 0, 0020. 0		
67	A FSDT-MITC Piezoelectric Shell Finite Element with Ferroelectric Non-linearity. Journal of Intelligent Material Systems and Structures, 2009, 20, 2055-2075.	1.4	17
68	Modelling of martensitic transformation and plastic slip effects on the thermo-mechanical behaviour of Fe-based shape memory alloys. Mechanics of Materials, 2009, 41, 849-856.	1.7	23
69	Ellipticity loss analysis for tangent moduli deduced from a large strain elastic-plastic self-consistent model. International Journal of Plasticity, 2009, 25, 205-238.	4.1	46
70	Role of intragranular microstructure development in the macroscopic behavior of multiphase steels in the context of changing strain paths. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 517, 300-311.	2.6	18
71	Strain localization analysis using a multiscale model. Computational Materials Science, 2009, 45, 768-773.	1.4	17
72	Numerical tool for SMA material simulation: application to composite structure design. Smart Materials and Structures, 2009, 18, 104012.	1.8	13

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73	Dialogue entre exp�rience et simulation num�rique pour un multicristal en alliage m�moire de forme. Mecanique Et Industries, 2009, 10, 267-273.	0.2	0
74	Comparaison de configurations d'essais h�rog�nes en vue d'am�liorer l'identification du comportement �lastique orthotrope par l'erreur en relation de comportement. Mecanique Et Industries, 2009, 10, 351-364.	0.2	1
75	Nonlocal modelling of superelastic behavior of shape memory alloys. , 2009, , .		1
76	Coupling between experiment and numerical simulation of shape memory alloy multicrystal. , 2009, , .		1
77	Analysis of Niobium precipitates effect on the thermo-mechanical behavior of a NiTiNb Shape Memory Alloy and Modeling. , 2009, , .		0
78	Tensile properties of a Fe-32Mn-6Si shape memory alloy. Strength of Materials, 2008, 40, 203-211.	0.2	8
79	Micromechanical analysis of precipitate effects on shape memory alloys behaviour. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 481-482, 366-370.	2.6	18
80	A simplified micromechanical constitutive law adapted to the design of shape memory applications by finite element methods. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 481-482, 384-388.	2.6	26
81	Numerical Tool Based on Finite Element Method for SMA Structures Design. , 2008, , .		2
82	A Multiscale Model Based On Intragranular Microstructure � Prediction Of Dislocation Patterns At The Microscopic Scale. AIP Conference Proceedings, 2007, , .	0.3	1
83	A Multiscale Model Based On Intragranular Microstructure: Influence Of Grain-Scale Substructure On Macroscopic Behaviour Of An IF-Steel During Complex Load Paths. AIP Conference Proceedings, 2007, , .	0.3	0
84	Macroscopic constitutive law for SMA: Application to structure analysis by FEM. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 438-440, 454-458.	2.6	26
85	Finite element analysis of a multilayer piezoelectric actuator taking into account the ferroelectric and ferroelastic behaviors. International Journal of Engineering Science, 2006, 44, 996-1006.	2.7	33
86	Macroscopic constitutive law of shape memory alloy thermomechanical behaviour. Application to structure computation by FEM. Mechanics of Materials, 2006, 38, 510-524.	1.7	84
87	Finite element analysis of a multilayer piezoelectric actuator taking into account the ferroelectric and ferroelastic behaviors. , 2005, 5761, 316.		0
88	Mod�lisation ph�nom�ologique du comportement de c�ramiques ferro�lectriques et ferro�lastiques. Mecanique Et Industries, 2005, 6, 337-342.	0.2	2
89	Constitutive Law for Ferroelastic and Ferroelectric Piezoceramics. Journal of Intelligent Material Systems and Structures, 2005, 16, 221-236.	1.4	46
90	Constitutive law for ferroelectric and ferroelastic single crystals: a micromechanical approach. Computational Materials Science, 2005, 32, 355-359.	1.4	14

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91	Ductility Loss Modelling for BCC Single Crystals. International Journal of Forming Processes, 2005, 8, 135-158.	0.3	11
92	Electro-mechanical modeling of a ferroelastic relaxor single crystal. Journal of Advanced Science, 2005, 17, 32-37.	0.1	0
93	Finite element simulation of a multocrystal in shape memory alloy. European Physical Journal Special Topics, 2004, 115, 375-382.	0.2	1
94	Phenomenological modelling of the non-linear behavior of ferroelectric materials. European Physical Journal Special Topics, 2004, 115, 67-72.	0.2	2
95	Modelling of the martensitic phase transformation for finite element computation. European Physical Journal Special Topics, 2004, 115, 351-359.	0.2	11
96	Micromechanical model for ferroelectric and ferroelastic single crystals. , 2004, , .		0
97	An original pure bending device with large displacements and rotations for static and fatigue tests of composite structures. Composites Part B: Engineering, 2003, 34, 447-458.	5.9	21
98	New anisothermal creep modelling for Cu-based shape memory alloys. Revue De Metallurgie, 2003, 100, 203-209.	0.3	0
99	Determination of the interaction energy in the martensitic state. International Journal of Plasticity, 2002, 18, 1619-1647.	4.1	47
100	Contribution of industrial composite parts to fatigue behaviour simulation. International Journal of Fatigue, 2002, 24, 307-318.	2.8	12
101	Analysis of high stress gradients in composite plates with rapidly varying thickness. Composites Science and Technology, 1998, 58, 791-799.	3.8	2
102	Analysis of Niobium Precipitates Effect on the Thermo-Mechanical Behavior of a NiTiNb Shape Memory Alloy. , 0, , 357-364.		0