Ferdinando Auricchio

List of Publications by Year
in descending order

375 papers	13,741 citations	19636 61 h-index	33869 99 g-index
386 all docs	386 docs citations	386 times ranked	8567 citing authors

#	Article	IF	Citations
1	Shape-memory alloys: macromodelling and numerical simulations of the superelastic behavior. Computer Methods in Applied Mechanics and Engineering, 1997, 146, 281-312.	3.4	528
2	Shape-memory alloys: modelling and numerical simulations of the finite-strain superelastic behavior. Computer Methods in Applied Mechanics and Engineering, 1997, 143, 175-194.	3.4	399
3	ISOGEOMETRIC COLLOCATION METHODS. Mathematical Models and Methods in Applied Sciences, 2010, 20, 2075-2107.	1.7	308
4	Mechanical behavior of coronary stents investigated through the finite element method. Journal of Biomechanics, 2002, 35, 803-811.	0.9	273
5	3D printing of reinforced concrete elements: Technology and design approach. Construction and Building Materials, 2018, 165, 218-231.	3.2	251
6	A one-dimensional model for superelastic shape-memory alloys with different elastic properties between austenite and martensite. International Journal of Non-Linear Mechanics, 1997, 32, 1101-1114.	1.4	246
7	A three-dimensional model describing stress-induced solid phase transformation with permanent inelasticity. International Journal of Plasticity, 2007, 23, 207-226.	4.1	216
8	A three-dimensional model describing stress-temperature induced solid phase transformations: solution algorithm and boundary value problems. International Journal for Numerical Methods in Engineering, 2004, 61, 807-836.	1.5	215
9	A 3-D phenomenological constitutive model for shape memory alloys under multiaxial loadings. International Journal of Plasticity, 2010, 26, 976-991.	4.1	211
10	A fully â€œlocking-freeâ€•isogeometric approach for plane linear elasticity problems: A stream function formulation. Computer Methods in Applied Mechanics and Engineering, 2007, 197, 160-172.	3.4	199
11	A robust integration-algorithm for a finite-strain shape-memory-alloy superelastic model. International Journal of Plasticity, 2001, 17, 971-990.	4.1	174
12	A simple algorithm for obtaining nearly optimal quadrature rules for NURBS-based isogeometric analysis. Computer Methods in Applied Mechanics and Engineering, 2012, 249-252, 15-27.	3.4	172
13	Isogeometric collocation for elastostatics and explicit dynamics. Computer Methods in Applied Mechanics and Engineering, 2012, 249-252, 2-14.	3.4	171
14	Evaluation of friction of stainless steel and esthetic self-ligating brackets in various bracket-archwire combinations. American Journal of Orthodontics and Dentofacial Orthopedics, 2003, 124, 395-402.	0.8	164
15	A predictive study of the mechanical behaviour of coronary stents by computer modelling. Medical Engineering and Physics, 2005, 27, 13-18.	0.8	164
16	Simulating the spread of COVID-19 via a spatially-resolved susceptibleâ€“exposedâ€“infectedâ€“recoveredâ€“deceased (SEIRD) model with heterogeneous diffusion. Applied Mathematics Letters, 2021, 111, 106617.	1.5	156
17	Generalized plasticity and shape-memory alloys. International Journal of Solids and Structures, 1996, 33, 991-1003.	1.3	151
18	Carotid artery stenting simulation: From patient-specific images to finite element analysis. Medical Engineering and Physics, 2011, 33, 281-289.	0.8	145

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19	Improvements and algorithmical considerations on a recent three-dimensional model describing stress-induced solid phase transformations. International Journal for Numerical Methods in Engineering, 2002, 55, 1255-1284.	1.5	137
20	Influence of meso-structure and chemical composition on FDM 3D-printed parts. Composites Part B: Engineering, 2017, 113, 371-380.	5.9	135
21	3D printing: clinical applications in orthopaedics and traumatology. EFORT Open Reviews, 2016, 1, 121-127.	1.8	128
22	Expandable drug delivery system for gastric retention based on shape memory polymers: Development via 4D printing and extrusion. International Journal of Pharmaceutics, 2019, 571, 118700.	2.6	126
23	Stainless and shape memory alloy coronary stents: a computational study on the interaction with the vascular wall. Biomechanics and Modeling in Mechanobiology, 2004, 2, 205-17.	1.4	123
24	Linked interpolation for Reissner-Mindlin plate elements: Part II—A simple triangle. International Journal for Numerical Methods in Engineering, 1993, 36, 3057-3066.	1.5	122
25	Numerical investigation of the intravascular coronary stent flexibility. Journal of Biomechanics, 2004, 37, 495-501.	0.9	122
26	Seismic Assessment of Concentrically Braced Steel Frames with Shape Memory Alloy Braces. Journal of Structural Engineering, 2007, 133, 862-870.	1.7	122
27	The clinical use of 3D printing in surgery. Updates in Surgery, 2018, 70, 381-388.	0.9	121
28	A Superelastic Shape-Memory-Alloy Beam Model. Journal of Intelligent Material Systems and Structures, 1997, 8, 489-501.	1.4	117
29	Theoretical and numerical modeling of shape memory alloys accounting for multiple phase transformations and martensite reorientation. International Journal of Plasticity, 2014, 59, 30-54.	4.1	117
30	Locking-free isogeometric collocation methods for spatial Timoshenko rods. Computer Methods in Applied Mechanics and Engineering, 2013, 263, 113-126.	3.4	114
31	A mixed finite element method for beam and frame problems. Computational Mechanics, 2003, 31, 192-203.	2.2	113
32	A finite strain kinematic hardening constitutive model based on Hencky strain: General framework, solution algorithm and application to shape memory alloys. International Journal of Plasticity, 2011, 27, 940-961.	4.1	108
33	Value of 3D printing for the comprehension of surgical anatomy. Surgical Endoscopy and Other Interventional Techniques, 2017, 31, 4102-4110.	1.3	108
34	Finite-element Analysis of a Stenotic Artery Revascularization Through a Stent Insertion. Computer Methods in Biomechanics and Biomedical Engineering, 2001, 4, 249-263.	0.9	107
35	Modelling of SMA materials: Training and two way memory effects. Computers and Structures, 2003, 81, 2301-2317.	2.4	104
36	Patient-specific isogeometric structural analysis of aortic valve closure. Computer Methods in Applied Mechanics and Engineering, 2015, 284, 508-520.	3.4	102

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37	A three-dimensional model describing stress-temperature induced solid phase transformations: thermomechanical coupling and hybrid composite applications. International Journal for Numerical Methods in Engineering, 2004, 61, 716-737.	1.5	99
38	Simulation of transcatheter aortic valve implantation through patient-specific finite element analysis: Two clinical cases. Journal of Biomechanics, 2014, 47, 2547-2555.	0.9	99
39	Experimental response of additively manufactured metallic pentamode materials confined between stiffening plates. Composite Structures, 2016, 142, 254-262.	3.1	96
40	A framework for designing patientâ€specific bioprosthetic heart valves using immersogeometric fluidâ€"structure interaction analysis. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e2938.	1.0	93
41	Single-variable formulations and isogeometric discretizations for shear deformable beams. Computer Methods in Applied Mechanics and Engineering, 2015, 284, 988-1004.	3.4	90
42	A uniaxial model for shape-memory alloys. International Journal of Solids and Structures, 1997, 34, 3601-3618.	1.3	89
43	The importance of the exact satisfaction of the incompressibility constraint in nonlinear elasticity: mixed FEMs versus NURBS-based approximations. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 314-323.	3.4	89
44	Androgen-Induced Cell Migration: Role of Androgen Receptor/Filamin A Association. PLoS ONE, 2011, 6, e17218.	1.1	89
45	A macroscopic 1D model for shape memory alloys including asymmetric behaviors and transformation-dependent elastic properties. Computer Methods in Applied Mechanics and Engineering, 2009, 198, 1631-1637.	3.4	87
46	Two material models for cyclic plasticity: Nonlinear kinematic hardening and generalized plasticity. International Journal of Plasticity, 1995, 11, 65-98.	4.1	82
47	A temperature-dependent beam for shape-memory alloys: Constitutive modelling, finite-element implementation and numerical simulations. Computer Methods in Applied Mechanics and Engineering, 1999, 174, 171-190.	3.4	80
48	Thermo-mechanical modelling of a superelastic shape-memory wire under cyclic stretchingâ€"bending loadings. International Journal of Solids and Structures, 2001, 38, 6123-6145.	1.3	80
49	Simulation of transcatheter aortic valve implantation: a patient-specific finite element approach. Computer Methods in Biomechanics and Biomedical Engineering, 2014, 17, 1347-1357.	0.9	80
50	Evaluation of friction of conventional and metal-insert ceramic brackets in various bracket-archwire combinations. American Journal of Orthodontics and Dentofacial Orthopedics, 2003, 124, 403-409.	0.8	79
51	Androgens Induce Invasiveness of Triple Negative Breast Cancer Cells Through AR/Src/PI3-K Complex Assembly. Scientific Reports, 2019, 9, 4490.	1.6	79
52	Seismic Vibration Control Using Superelastic Shape Memory Alloys. Journal of Engineering Materials and Technology, Transactions of the ASME, 2006, 128, 294-301.	0.8	78
53	Finite Element Analysis of Additive Manufacturing Based on Fused Deposition Modeling: Distortions Prediction and Comparison With Experimental Data. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2019, 141, .	1.3	77
54	Statistical finite element analysis of the buckling behavior of honeycomb structures. Composite Structures, 2013, 105, 240-255.	3.1	74

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55	A shear deformable plate element with an exact thin limit. Computer Methods in Applied Mechanics and Engineering, 1994, 118, 393-412.	3.4	71
56	A mixed-enhanced finite-element for the analysis of laminated composite plates. International Journal for Numerical Methods in Engineering, 1999, 44, 1481-1504.	1.5	71
57	Prediction of patient-specific post-operative outcomes of TAVI procedure: The impact of the positioning strategy on valve performance. Journal of Biomechanics, 2016, 49, 2513-2519.	0.9	71
58	Human dilated ascending aorta: Mechanical characterization via uniaxial tensile tests. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 53, 257-271.	1.5	69
59	Isogeometric collocation methods for the Reissner–Mindlin plate problem. Computer Methods in Applied Mechanics and Engineering, 2015, 284, 489-507.	3.4	68
60	On the Assumed Natural Strain method to alleviate locking in solid-shell NURBS-based finite elements. Computational Mechanics, 2014, 53, 1341-1353.	2.2	67
61	Computational Studies of Shape Memory Alloy Behavior in Biomedical Applications. Journal of Biomechanical Engineering, 2005, 127, 716-725.	0.6	66
62	Diffusion–reaction compartmental models formulated in a continuum mechanics framework: application to COVID-19, mathematical analysis, and numerical study. Computational Mechanics, 2020, 66, 1131-1152.	2.2	63
63	Non-prismatic beams: A simple and effective Timoshenko-like model. International Journal of Solids and Structures, 2016, 90, 236-250.	1.3	62
64	From CT scanning to 3-D printing technology for the preoperative planning in laparoscopic splenectomy. Surgical Endoscopy and Other Interventional Techniques, 2016, 30, 366-371.	1.3	62
65	Refined First-Order Shear Deformation Theory Models for Composite Laminates. Journal of Applied Mechanics, Transactions ASME, 2003, 70, 381-390.	1.1	61
66	Patient-specific aortic endografting simulation: From diagnosis to prediction. Computers in Biology and Medicine, 2013, 43, 386-394.	3.9	61
67	Assumed Natural Strain NURBS-based solid-shell element for the analysis of large deformation elasto-plastic thin-shell structures. Computer Methods in Applied Mechanics and Engineering, 2015, 284, 861-880.	3.4	59
68	Hysteresis of Multiconfiguration Assemblies of Nitinol and Steel Strands: Experiments and Phenomenological Identification. Journal of Engineering Mechanics - ASCE, 2015, 141, .	1.6	58
69	An overview on 3D printing for abdominal surgery. Surgical Endoscopy and Other Interventional Techniques, 2020, 34, 1-13.	1.3	56
70	Approximation of incompressible large deformation elastic problems: some unresolved issues. Computational Mechanics, 2013, 52, 1153-1167.	2.2	55
71	Effect of testing procedures on buildability properties of 3D-printable concrete. Construction and Building Materials, 2020, 245, 118286.	3.2	54
72	Finite element analysis of TAVI: Impact of native aortic root computational modeling strategies on simulation outcomes. Medical Engineering and Physics, 2017, 47, 2-12.	0.8	53

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73	Rate-dependent Thermo-mechanical Modelling of Superelastic Shape-memory Alloys for Seismic Applications. Journal of Intelligent Material Systems and Structures, 2008, 19, 47-61.	1.4	52
74	Feasibility Assessment of an Innovative Isolation Bearing System with Shape Memory Alloys. Journal of Earthquake Engineering, 2009, 13, 18-39.	1.4	51
75	Performance evaluation of shape-memory-alloy superelastic behavior to control a stay cable in cable-stayed bridges. International Journal of Non-Linear Mechanics, 2011, 46, 470-477.	1.4	51
76	On the geometrically exact beam model: A consistent, effective and simple derivation from three-dimensional finite-elasticity. International Journal of Solids and Structures, 2008, 45, 4766-4781.	1.3	50
77	A three-dimensional finite-strain phenomenological model for shape-memory polymers: Formulation, numerical simulations, and comparison with experimental data. International Journal of Plasticity, 2016, 83, 153-177.	4.1	50
78	Bioink Composition and Printing Parameters for 3D Modeling Neural Tissue. Cells, 2019, 8, 830.	1.8	50
79	A new model of generalized plasticity and its numerical implementation. International Journal of Solids and Structures, 1993, 30, 3171-3184.	1.3	49
80	A return-map algorithm for general associative isotropic elasto-plastic materials in large deformation regimes. International Journal of Plasticity, 1999, 15, 1359-1378.	4.1	49
81	On a new integration scheme for von-Mises plasticity with linear hardening. International Journal for Numerical Methods in Engineering, 2003, 56, 1375-1396.	1.5	49
82	A triangular thick plate finite element with an exact thin limit. Finite Elements in Analysis and Design, 1995, 19, 57-68.	1.7	48
83	A RATE-INDEPENDENT MODEL FOR THE ISOTHERMAL QUASI-STATIC EVOLUTION OF SHAPE-MEMORY MATERIALS. Mathematical Models and Methods in Applied Sciences, 2008, 18, 125-164.	1.7	48
84	A stability study of some mixed finite elements for large deformation elasticity problems. Computer Methods in Applied Mechanics and Engineering, 2005, 194, 1075-1092.	3.4	47
85	Second-order accurate integration algorithms for von-Mises plasticity with a nonlinear kinematic hardening mechanism. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 1827-1846.	3.4	47
86	Patientâ€specific CFD modelling in the thoracic aorta with PCâ€MRIâ€"based boundary conditions: A leastâ€square threeâ€element Windkessel approach. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e3134.	1.0	47
87	The Modified Arch Landing Areas Nomenclature (MALAN) Improves Prediction of Stent Graft Displacement Forces: Proof of Concept by Computational Fluid Dynamics Modelling. European Journal of Vascular and Endovascular Surgery, 2018, 55, 584-592.	0.8	45
88	EARTHQUAKE PERFORMANCE OF STEEL FRAMES WITH NITINOL BRACES. Journal of Earthquake Engineering, 2006, 10, 45-66.	1.4	44
89	A three-dimensional phenomenological model for shape memory alloys including two-way shape memory effect and plasticity. Mechanics of Materials, 2019, 136, 103085.	1.7	44
90	An analysis of some mixed-enhanced finite element for plane linear elasticity. Computer Methods in Applied Mechanics and Engineering, 2005, 194, 2947-2968.	3.4	43

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91	A novel layered topology of auxetic materials based on the tetrachiral honeycomb microstructure. Materials and Design, 2019, 179, 107883.	3.3	43
92	3D Automatic Segmentation of Aortic Computed Tomography Angiography Combining Multi-View 2D Convolutional Neural Networks. Cardiovascular Engineering and Technology, 2020, 11, 576-586.	0.7	43
93	A finite-strain cam-clay model in the framework of multiplicative elasto-plasticity. International Journal of Plasticity, 1998, 14, 1155-1187.	4.1	42
94	SMA Numerical Modeling Versus Experimental Results: Parameter Identification and Model Prediction Capabilities. Journal of Materials Engineering and Performance, 2009, 18, 649-654.	1.2	42
95	The androgen receptor/filamin A complex as a target in prostate cancer microenvironment. Cell Death and Disease, 2021, 12, 127.	2.7	42
96	3-D Printed Microfluidic Sensor in SIW Technology for Liquidsâ€™ Characterization. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 1175-1184.	2.9	41
97	A novel â€˜optimalâ€™ exponential-based integration algorithm for von-Mises plasticity with linear hardening: Theoretical analysis on yield consistency, accuracy, convergence and numerical investigations. International Journal for Numerical Methods in Engineering, 2006, 67, 449-498.	1.5	40
98	Extranuclear partners of androgen receptor: at the crossroads of proliferation, migration, and neuritogenesis. FASEB Journal, 2017, 31, 1289-1300.	0.2	40
99	Patientâ€space cific finite element analysis of carotid artery stenting: a focus on vessel modeling. International Journal for Numerical Methods in Biomedical Engineering, 2013, 29, 645-664.	1.0	37
100	Cross-talk between androgen receptor/filamin A and TrkA regulates neurite outgrowth in PC12 cells. Molecular Biology of the Cell, 2015, 26, 2858-2872.	0.9	37
101	3D-printed photo-spectroelectrochemical devices for *in situ* and *in operando* X-ray absorption spectroscopy investigation. Journal of Synchrotron Radiation, 2016, 23, 622-628.	1.0	37
102	Cross-talk between androgen receptor and nerve growth factor receptor in prostate cancer cells: implications for a new therapeutic approach. Cell Death Discovery, 2018, 4, 5.	2.0	37
103	A 3D finite strain phenomenological constitutive model for shape memory alloys considering martensite reorientation. Continuum Mechanics and Thermodynamics, 2010, 22, 345-362.	1.4	36
104	Fatigue life assessment of cardiovascular balloon-expandable stents: A two-scale plasticityâ€“damage model approach. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 15, 78-92.	1.5	36
105	Fatigue of Metallic Stents: From Clinical Evidence to Computational Analysis. Annals of Biomedical Engineering, 2016, 44, 287-301.	1.3	36
106	Graded-material design based on phase-field and topology optimization. Computational Mechanics, 2019, 64, 1589-1600.	2.2	36
107	Impact of Carotid Stent Cell Design on Vessel Scaffolding: A Case Study Comparing Experimental Investigation and Numerical Simulations. Journal of Endovascular Therapy, 2011, 18, 397-406.	0.8	35
108	Comparative Analysis of Porcine and Human Thoracic Aortic Stiffness. European Journal of Vascular and Endovascular Surgery, 2018, 55, 560-566.	0.8	35

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109	Shape memory response and hierarchical motion capabilities of 4D printed auxetic structures. Mechanics Research Communications, 2020, 103, 103463.	1.0	35
110	A shakedown analysis of high cycle fatigue of shape memory alloys. International Journal of Fatigue, 2016, 87, 112-123.	2.8	34
111	3-D Printed Substrate Integrated Slab Waveguide for Single-Mode Bandwidth Enhancement. IEEE Microwave and Wireless Components Letters, 2017, 27, 536-538.	2.0	34
112	Multi-Material 3D Printed Shape Memory Polymer with Tunable Melting and Glass Transition Temperature Activated by Heat or Light. Polymers, 2020, 12, 710.	2.0	34
113	Innovative Superelastic Isolation Device. Journal of Earthquake Engineering, 2011, 15, 72-89.	1.4	33
114	Aortic Hemodynamics After Thoracic Endovascular Aortic Repair, With Particular Attention to the Bird-Beak Configuration. Journal of Endovascular Therapy, 2014, 21, 791-802.	0.8	33
115	Patient-specific simulation of a stentless aortic valve implant: the impact of fibres on leaflet performance. Computer Methods in Biomechanics and Biomedical Engineering, 2014, 17, 277-285.	0.9	33
116	Applications of Shape Memory Alloys in Structural Engineering. , 2015, , 369-403.		33
117	Visible light 3D printing with epoxidized vegetable oils. Additive Manufacturing, 2019, 25, 317-324.	1.7	33
118	Pre-Programmed Tri-Layer Electro-Thermal Actuators Composed of Shape Memory Polymer and Carbon Nanotubes. Soft Robotics, 2020, 7, 123-129.	4.6	33
119	Analysis of kinematic linked interpolation methods for Reissner–Mindlin plate problems. Computer Methods in Applied Mechanics and Engineering, 2001, 190, 2465-2482.	3.4	32
120	An improved, fully symmetric, finite-strain phenomenological constitutive model for shape memory alloys. Finite Elements in Analysis and Design, 2011, 47, 166-174.	1.7	32
121	A Numerical/Experimental Study of Nitinol Actuator Springs. Journal of Materials Engineering and Performance, 2014, 23, 2420-2428.	1.2	32
122	Analytical derivation of a general 2D non-prismatic beam model based on the Hellinger–Reissner principle. Engineering Structures, 2015, 101, 88-98.	2.6	32
123	Extensibility and Distensibility of the Thoracic Aorta in Patients with Aneurysm. European Journal of Vascular and Endovascular Surgery, 2017, 53, 199-205.	0.8	32
124	Mixed Isogeometric Finite Cell Methods for the Stokes problem. Computer Methods in Applied Mechanics and Engineering, 2017, 316, 400-423.	3.4	32
125	The dimensional reduction approach for 2D non-prismatic beam modelling: A solution based on Hellinger–Reissner principle. International Journal of Solids and Structures, 2015, 63, 264-276.	1.3	31
126	Effects of clinico-pathological risk factors on in-vitro mechanical properties of human dilated ascending aorta. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 77, 1-11.	1.5	31

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127	Structural analysis of non-prismatic beams: Critical issues, accurate stress recovery, and analytical definition of the Finite Element (FE) stiffness matrix. Engineering Structures, 2020, 213, 110252.	2.6	31
128	Non-prismatic Timoshenko-like beam model: Numerical solution via isogeometric collocation. Computers and Mathematics With Applications, 2017, 74, 1531-1541.	1.4	30
129	Accurate Prediction of Melt Pool Shapes in Laser Powder Bed Fusion by the Non-Linear Temperature Equation Including Phase Changes. Integrating Materials and Manufacturing Innovation, 2019, 8, 167-177.	1.2	30
130	On the enhanced strain technique for elasticity problems. Computers and Structures, 2003, 81, 777-787.	2.4	29
131	A computational tool to support pre-operative planning of stentless aortic valve implant. Medical Engineering and Physics, 2011, 33, 1183-1192.	0.8	29
132	On the robustness and efficiency of integration algorithms for a 3D finite strain phenomenological SMA constitutive model. International Journal for Numerical Methods in Engineering, 2011, 85, 107-134.	1.5	29
133	Stent-Graft Deployment Increases Aortic Stiffness in an ExÂVivo Porcine Model. Annals of Vascular Surgery, 2017, 43, 302-308.	0.4	28
134	Modular flow chamber for engineering bone marrow architecture and function. Biomaterials, 2017, 146, 60-71.	5.7	28
135	Haemodynamic impact of stentâ€"vessel (mal)apposition following carotid artery stenting: mind the gaps!. Computer Methods in Biomechanics and Biomedical Engineering, 2013, 16, 648-659.	0.9	27
136	SMA Biomedical Applications. , 2015, , 307-341.		27
137	Characterization of 3D-printed dielectric substrates with different infill for microwave applications. , 2016, , .		27
138	A cost-effective isogeometric approach for composite plates based on a stress recovery procedure. Composites Part B: Engineering, 2018, 138, 12-18.	5.9	27
139	A one-dimensional phenomenological model for the two-way shape-memory effect in semi-crystalline networks. Polymer, 2018, 158, 130-148.	1.8	27
140	Skeleton-stabilized immersogeometric analysis for incompressible viscous flow problems. Computer Methods in Applied Mechanics and Engineering, 2019, 344, 421-450.	3.4	27
141	Partial-mixed formulation and refined models for the analysis of composite laminates within an FSDT. Composite Structures, 1999, 46, 103-113.	3.1	26
142	Error-estimate-based adaptive integration for immersed isogeometric analysis. Computers and Mathematics With Applications, 2020, 80, 2481-2516.	1.4	26
143	Changes in aortic pulse wave velocity of four thoracic aortic stent grafts in an ex vivo porcine model. PLoS ONE, 2017, 12, e0186080.	1.1	26
144	A computational approach for the lifetime prediction of cardiovascular balloon-expandable stents. International Journal of Fatigue, 2015, 75, 69-79.	2.8	25

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145	An experimental, theoretical and numerical investigation of shape memory polymers. International Journal of Plasticity, 2015, 67, 127-147.	4.1	25
146	Theoretical and numerical modeling of dense and porous shape memory alloys accounting for coupling effects of plasticity and transformation. International Journal of Solids and Structures, 2016, 88-89, 248-262.	1.3	25
147	A phase-field-based graded-material topology optimization with stress constraint. Mathematical Models and Methods in Applied Sciences, 2020, 30, 1461-1483.	1.7	25
148	3D Bioprinted Scaffolds Containing Mesenchymal Stem/Stromal Lyosecretome: Next Generation Controlled Release Device for Bone Regenerative Medicine. Pharmaceutics, 2021, 13, 515.	2.0	25
149	Integration schemes for von-Mises plasticity models based on exponential maps: numerical investigations and theoretical considerations. International Journal for Numerical Methods in Engineering, 2005, 64, 1133-1165.	1.5	24
150	Numerical and Experimental Evaluation of the Damping Properties of Shape-Memory Alloys. Journal of Engineering Materials and Technology, Transactions of the ASME, 2006, 128, 312-319.	0.8	24
151	A generalized elastoplastic plate theory and its algorithmic implementation. International Journal for Numerical Methods in Engineering, 1994, 37, 2583-2608.	1.5	23
152	Patient-specific analysis of post-operative aortic hemodynamics: a focus on thoracic endovascular repair (TEVAR). Computational Mechanics, 2014, 54, 943-953.	2.2	23
153	Sequential Motion of 4D Printed Photopolymers with Broad Glass Transition. Macromolecular Materials and Engineering, 2020, 305, 1900370.	1.7	23
154	Preliminary investigation on a new natural based poly(gammaâ€glutamic acid)/Chitosan bioink. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2020, 108, 2718-2732.	1.6	23
155	Theoretical and Experimental Investigation on SMA Superelastic Springs. Journal of Materials Engineering and Performance, 2011, 20, 706-711.	1.2	22
156	Comparison and critical analysis of invariant-based models with respect to their ability in fitting human aortic valve data. Annals of Solid and Structural Mechanics, 2012, 4, 1-14.	0.5	22
157	An experimental investigation of the impact of thoracic endovascular aortic repair on longitudinal strain. European Journal of Cardio-thoracic Surgery, 2016, 50, 955-961.	0.6	22
158	ComputationalÂMethods for Elastoplasticity: AnÂOverviewÂof Conventional and Less-Conventional Approaches. Archives of Computational Methods in Engineering, 2018, 25, 545-589.	6.0	22
159	A mixed FSDT finite element for monoclinic laminated plates. Computers and Structures, 2006, 84, 624-639.	2.4	21
160	A 1D rate-dependent viscous constitutive model for superelastic shape-memory alloys: formulation and comparison with experimental data. Smart Materials and Structures, 2007, 16, S39-S50.	1.8	21
161	Numerical investigation on the seismic dissipation of glazed curtain wall equipped on high-rise buildings. Engineering Structures, 2019, 179, 225-245.	2.6	21
162	Left atrial appendage closure guided by 3D computed tomography printing technology: A case control study. Journal of Cardiovascular Computed Tomography, 2019, 13, 336-339.	0.7	21

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163	Myoblast 3D bioprinting to burst in vitro skeletal muscle differentiation. Journal of Tissue Engineering and Regenerative Medicine, 2022, 16, 484-495.	1.3	21
164	Self-sensing CF-GFRP rods as mechanical reinforcement and sensors of concrete beams. Smart Materials and Structures, 2006, 15, 182-186.	1.8	20
165	A three€dimensional phenomenological model for Magnetic Shape Memory Alloys. GAMM Mitteilungen, 2011, 34, 90-96.	2.7	20
166	Aortic root 3D parametric morphological model from 2D-echo images. Computers in Biology and Medicine, 2013, 43, 2196-2204.	3.9	20
167	A three-dimensional phenomenological constitutive model for porous shape memory alloys including plasticity effects. Journal of Intelligent Material Systems and Structures, 2016, 27, 608-624.	1.4	20
168	Polyacrylate/polyacrylate-PEG biomaterials obtained by high internal phase emulsions (HIPEs) with tailorable drug release and effective mechanical and biological properties. Materials Science and Engineering C, 2019, 105, 110060.	3.8	20
169	Experimental characterization and computational modeling of hydrogel cross-linking for bioprinting applications. International Journal of Artificial Organs, 2019, 42, 548-557.	0.7	20
170	Numerical Evaluation of Advanced Laser Control Strategies Influence on Residual Stresses for Laser Powder Bed Fusion Systems. Integrating Materials and Manufacturing Innovation, 2020, 9, 435-445.	1.2	20
171	Theoretical and Experimental Study of the Shape Memory Effect of Beams in Bending Conditions. Journal of Materials Engineering and Performance, 2011, 20, 712-718.	1.2	19
172	Innovative and efficient stent flexibility simulations based on isogeometric analysis. Computer Methods in Applied Mechanics and Engineering, 2015, 295, 347-361.	3.4	19
173	On a fictitious domain method with distributed Lagrange multiplier for interface problems. Applied Numerical Mathematics, 2015, 95, 36-50.	1.2	19
174	Planar Timoshenko-like model for multilayer non-prismatic beams. International Journal of Mechanics and Materials in Design, 2018, 14, 51-70.	1.7	19
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