

Pedro Areias

List of Publications by Year in descending order

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105
papers

6,083
citations

94381

37
h-index

69214

77
g-index

105
all docs

105
docs citations

105
times ranked

2772
citing authors

#	ARTICLE	IF	CITATIONS
1	Anisotropic hyperelastic/plastic behavior on stress-constrained thin structures by iterating on the elastic Cauchy's Green tensor. <i>Thin-Walled Structures</i> , 2022, 170, 108512.	2.7	0
2	Phase field modeling and computer implementation: A review. <i>Engineering Fracture Mechanics</i> , 2022, 262, 108234.	2.0	50
3	Wrinkling of finite-strain membranes with mixed solid-shell elements. <i>Engineering With Computers</i> , 2022, 38, 5309-5320.	3.5	2
4	Galerkin-based finite strain analysis with enriched radial basis interpolation. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2022, 394, 114873.	3.4	3
5	Moving least-squares in finite strain analysis with tetrahedra support. <i>Engineering Analysis With Boundary Elements</i> , 2022, 139, 1-13.	2.0	1
6	Modeling Permanent Deformation during Low-Cycle Fatigue: Application to the Pelvic Floor Muscles during Labor. <i>Journal of the Mechanics and Physics of Solids</i> , 2022, , 104908.	2.3	0
7	Coupled finite-element/topology optimization of continua using the Newton-Raphson method. <i>European Journal of Mechanics, A/Solids</i> , 2021, 85, 104117.	2.1	13
8	HERK integration of finite-strain fully anisotropic plasticity models. <i>Finite Elements in Analysis and Design</i> , 2021, 185, 103492.	1.7	0
9	One-step semi-implicit integration of general finite-strain plasticity models. <i>International Journal of Mechanics and Materials in Design</i> , 2021, 17, 73-87.	1.7	2
10	Extrapolation and Ceà-based implicit integration of anisotropic constitutive behavior. <i>International Journal for Numerical Methods in Engineering</i> , 2021, 122, 3218-3240.	1.5	4
11	An engineering interpretation of Nesterov's convex minimization algorithm and time integration: application to optimal fiber orientation. <i>Computational Mechanics</i> , 2021, 68, 211-227.	2.2	1
12	Fully anisotropic hyperelasto-plasticity with exponential approximation by power series and scaling/squaring. <i>Computational Mechanics</i> , 2021, 68, 391.	2.2	1
13	Quasi-static and dynamic fracture modeling by the nonlocal operator method. <i>Engineering Analysis With Boundary Elements</i> , 2021, 133, 120-137.	2.0	8
14	Combined sticking: a new approach for finite-amplitude Coulomb frictional contact. <i>International Journal of Mechanics and Materials in Design</i> , 2020, 16, 619-631.	1.7	2
15	A finite strain Raviart-Thomas tetrahedron. <i>European Journal of Mechanics, A/Solids</i> , 2020, 80, 103911.	2.1	4
16	Gradient-enhanced Raviart-Thomas tetrahedron for finite-strain problems. <i>Computers and Structures</i> , 2020, 231, 106212.	2.4	0
17	One-dimensional model for the unsteady flow of a generalized third-grade viscoelastic fluid. <i>Neural Computing and Applications</i> , 2020, 32, 12881-12894.	3.2	3
18	A finite strain mixed J_2 \hat{u} \hat{p} low-order tetrahedron. <i>Finite Elements in Analysis and Design</i> , 2020, 174, 103401.	1.7	0

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19	A continuous-stress tetrahedron for finite strain problems. <i>Finite Elements in Analysis and Design</i> , 2019, 165, 52-64.	1.7	2
20	A simple and robust Coulomb frictional algorithm based on 3 additional degrees-of-freedom and smoothing. <i>Finite Elements in Analysis and Design</i> , 2019, 167, 103321.	1.7	7
21	A Dimensional Reduction Algorithm and Software for Acyclically Dependent Constraints. <i>International Journal for Computational Methods in Engineering Science and Mechanics</i> , 2019, 20, 494-513.	1.4	0
22	A NURBS-based inverse analysis of thermal expansion induced morphing of thin shells. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019, 350, 480-510.	3.4	43
23	An objective and path-independent 3D finite-strain beam with least-squares assumed-strain formulation. <i>Computational Mechanics</i> , 2019, 64, 1115-1131.	2.2	2
24	Finite strain analysis of limestone / basaltic magma interaction and fracture: Low order mixed tetrahedron and remeshing. <i>European Journal of Mechanics, A/Solids</i> , 2019, 73, 235-247.	2.1	1
25	Surface-based and solid shell formulations of the 7-parameter shell model for layered CFRP and functionally graded power-based composite structures. <i>Mechanics of Advanced Materials and Structures</i> , 2019, 26, 1271-1289.	1.5	6
26	Stable finite element analysis of viscous dusty plasma. <i>Engineering Computations</i> , 2018, 35, 1230-1249.	0.7	0
27	General constitutive updating for finite strain formulations based on assumed strains and the Jacobian. <i>Finite Elements in Analysis and Design</i> , 2018, 143, 32-45.	1.7	2
28	Finite element analysis of plasma dust-acoustic waves. <i>Finite Elements in Analysis and Design</i> , 2018, 140, 38-49.	1.7	2
29	A multisurface constitutive model for highly cross-linked polymers with yield data obtained from molecular dynamics simulations. <i>International Journal of Mechanics and Materials in Design</i> , 2018, 14, 21-36.	1.7	9
30	Fracture properties prediction of clay/epoxy nanocomposites with interphase zones using a phase field model. <i>Engineering Fracture Mechanics</i> , 2018, 188, 287-299.	2.0	249
31	Effective 2D and 3D crack propagation with local mesh refinement and the screened Poisson equation. <i>Engineering Fracture Mechanics</i> , 2018, 189, 339-360.	2.0	149
32	Fully-coupled piezoelectric assumed-strain least-squares nonlinear shell. <i>Thin-Walled Structures</i> , 2018, 131, 631-645.	2.7	4
33	Analysis of experimentally assessed EVA foams with mixed solid-shell elements capable of very large strains. <i>Finite Elements in Analysis and Design</i> , 2017, 128, 19-31.	1.7	7
34	Steiner-point free edge cutting of tetrahedral meshes with applications in fracture. <i>Finite Elements in Analysis and Design</i> , 2017, 132, 27-41.	1.7	125
35	Isogeometric analysis of large-deformation thin shells using RHT-splines for multiple-patch coupling. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017, 316, 1157-1178.	3.4	210
36	A consistent anisotropic damage model for laminated fiber-reinforced composites using the 3D-version of the Puck failure criterion. <i>International Journal of Solids and Structures</i> , 2017, 126-127, 37-53.	1.3	70

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37	Finite-strain low order shell using least-squares strains and two-parameter thickness extensibility. <i>European Journal of Mechanics, A/Solids</i> , 2017, 61, 293-314.	2.1	3
38	Predictions of J integral and tensile strength of clay/epoxy nanocomposites material using phase field model. <i>Composites Part B: Engineering</i> , 2016, 93, 97-114.	5.9	75
39	Semi-implicit finite strain constitutive integration and mixed strain/stress control based on intermediate configurations. <i>Engineering Structures</i> , 2016, 124, 344-360.	2.6	5
40	A finite-strain solid shell using local Γ -frames and least-squares strains. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016, 311, 112-133.	3.4	11
41	A novel two-stage discrete crack method based on the screened Poisson equation and local mesh refinement. <i>Computational Mechanics</i> , 2016, 58, 1003-1018.	2.2	51
42	A multiscale multisurface constitutive model for the thermo-plastic behavior of polyethylene. <i>Polymer</i> , 2016, 105, 327-338.	1.8	34
43	Damage and fracture algorithm using the screened Poisson equation and local remeshing. <i>Engineering Fracture Mechanics</i> , 2016, 158, 116-143.	2.0	257
44	Phase-field analysis of finite-strain plates and shells including element subdivision. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016, 312, 322-350.	3.4	223
45	A finite element framework for the interplay between delamination and buckling of rubber-like bi-material systems and stretchable electronics. <i>Journal of the European Ceramic Society</i> , 2016, 36, 2371-2382.	2.8	16
46	A staggered approach for the coupling of Cahn-Hilliard type diffusion and finite strain elasticity. <i>Computational Mechanics</i> , 2016, 57, 339-351.	2.2	14
47	Finite-strain laminates: Bending-enhanced hexahedron and delamination. <i>Composite Structures</i> , 2016, 139, 277-290.	3.1	4
48	Least-squares finite strain hexahedral element/constitutive coupling based on parametrized configurations and the Γ -frame. <i>Finite Elements in Analysis and Design</i> , 2016, 108, 96-109.	1.7	8
49	A non-ordinary state-based peridynamics formulation for thermoplastic fracture. <i>International Journal of Impact Engineering</i> , 2016, 87, 83-94.	2.4	133
50	A finite strain quadrilateral based on least-squares assumed strains. <i>Engineering Structures</i> , 2015, 100, 1-16.	2.6	4
51	Coulomb frictional contact by explicit projection in the cone for finite displacement quasi-static problems. <i>Computational Mechanics</i> , 2015, 55, 57-72.	2.2	19
52	Finite strain quadrilateral shell using least-squares fit of relative Lagrangian in-plane strains. <i>Finite Elements in Analysis and Design</i> , 2015, 98, 26-40.	1.7	8
53	Semi-implicit finite strain constitutive integration of porous plasticity models. <i>Finite Elements in Analysis and Design</i> , 2015, 104, 41-55.	1.7	7
54	A constitutive-based element-by-element crack propagation algorithm with local mesh refinement. <i>Computational Mechanics</i> , 2015, 56, 291-315.	2.2	49

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55	A semi-implicit finite strain shell algorithm using in-plane strains based on least-squares. Computational Mechanics, 2015, 55, 673-696.	2.2	11
56	A simple assumed-strain quadrilateral shell element for finite strains and fracture. Engineering With Computers, 2015, 31, 691-709.	3.5	3
57	Abaqus implementation of phase-field model for brittle fracture. Computational Materials Science, 2015, 96, 472-484.	1.4	203
58	An extended isogeometric thin shell analysis based on Kirchhoff's Love theory. Computer Methods in Applied Mechanics and Engineering, 2015, 284, 265-291.	3.4	301
59	An Efficient Technique for Surface Strain Recovery from Photogrammetric Data using Meshless Interpolation. Strain, 2014, 50, 132-146.	1.4	11
60	The extended unsymmetric frontal solution for multiple-point constraints. Engineering Computations, 2014, 31, 1582-1607.	0.7	6
61	An alternative formulation for quasi-static frictional and cohesive contact problems. Computational Mechanics, 2014, 53, 807-824.	2.2	11
62	Finite strain fracture of 2D problems with injected anisotropic softening elements. Theoretical and Applied Fracture Mechanics, 2014, 72, 50-63.	2.1	155
63	An embedded formulation with conforming finite elements to capture strong discontinuities. International Journal for Numerical Methods in Engineering, 2013, 93, 224-244.	1.5	47
64	Element-wise algorithm for modeling ductile fracture with the Rousselier yield function. Computational Mechanics, 2013, 52, 1429-1443.	2.2	39
65	Initially rigid cohesive laws and fracture based on edge rotations. Computational Mechanics, 2013, 52, 931-947.	2.2	79
66	Asymmetric quadrilateral shell elements for finite strains. Computational Mechanics, 2013, 52, 81-97.	2.2	11
67	Damage-based fracture with electro-magnetic coupling. Computational Mechanics, 2013, 51, 629-640.	2.2	4
68	Assumed-metric spherically interpolated quadrilateral shell element. Finite Elements in Analysis and Design, 2013, 66, 53-67.	1.7	19
69	Numerical study towards the use of a SH wave ultrasonic-based strategy for crack detection in concrete structures. Engineering Structures, 2013, 49, 782-791.	2.6	10
70	Element-wise fracture algorithm based on rotation of edges. Engineering Fracture Mechanics, 2013, 110, 113-137.	2.0	209
71	Finite strain fracture of plates and shells with configurational forces and edge rotations. International Journal for Numerical Methods in Engineering, 2013, 94, 1099-1122.	1.5	228
72	A damage-based temperature-dependent model for ductile fracture with finite strains and configurational forces. International Journal of Fracture, 2012, 178, 215-232.	1.1	6

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73	A new semi-implicit formulation for multiple-surface flow rules in multiplicative plasticity. Computational Mechanics, 2012, 49, 545-564.	2.2	36
74	Implicit solutions with consistent additive and multiplicative components. Finite Elements in Analysis and Design, 2012, 57, 15-31.	1.7	10
75	A damage model for ductile crack initiation and propagation. Computational Mechanics, 2011, 47, 641-656.	2.2	21
76	Exact corotational shell for finite strains and fracture. Computational Mechanics, 2011, 48, 385-406.	2.2	32
77	Finite element studies of the mechanical behaviour of the diaphragm in normal and pathological cases. Computer Methods in Biomechanics and Biomedical Engineering, 2011, 14, 505-513.	0.9	21
78	Finite strain plasticity, the stress condition and a complete shell model. Computational Mechanics, 2010, 45, 189-209.	2.2	28
79	Smooth finite strain plasticity with non-local pressure support. International Journal for Numerical Methods in Engineering, 2010, 81, 106-134.	1.5	29
80	Active and passive behaviors of soft tissues: Pelvic floor muscles. International Journal for Numerical Methods in Biomedical Engineering, 2010, 26, 667-680.	1.0	2
81	Arbitrary bi-dimensional finite strain cohesive crack propagation. Computational Mechanics, 2009, 45, 61-75.	2.2	42
82	Quasi-static crack propagation in plane and plate structures using set-valued traction-separation laws. International Journal for Numerical Methods in Engineering, 2008, 74, 475-505.	1.5	38
83	Stabilized four-node tetrahedron with nonlocal pressure for modeling hyperelastic materials. International Journal for Numerical Methods in Engineering, 2008, 76, 1185-1201.	1.5	15
84	Finite element formulation for modeling nonlinear viscoelastic elastomers. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 4702-4717.	3.4	56
85	A simplified mesh-free method for shear bands with cohesive surfaces. International Journal for Numerical Methods in Engineering, 2007, 69, 993-1021.	1.5	195
86	A meshfree thin shell method for non-linear dynamic fracture. International Journal for Numerical Methods in Engineering, 2007, 72, 524-548.	1.5	429
87	Two-scale method for shear bands: thermal effects and variable bandwidth. International Journal for Numerical Methods in Engineering, 2007, 72, 658-696.	1.5	31
88	Analysis of Finite Strain Anisotropic Elastoplastic Fracture in Thin Plates and Shells. Journal of Aerospace Engineering, 2006, 19, 259-270.	0.8	34
89	Damage modelling in metal forming problems using an implicit non-local gradient model. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 6646-6660.	3.4	50
90	A comment on the article "A finite element method for simulation of strong and weak discontinuities in solid mechanics" by A. Hansbo and P. Hansbo [Comput. Methods Appl. Mech. Engrg. 193 (2004) 3523-3540]. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 1275-1276.	3.4	78

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91	Analysis of fracture in thin shells by overlapping paired elements. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 5343-5360.	3.4	113
92	A new approach for modelling slip lines in geological materials with cohesive models. International Journal for Numerical and Analytical Methods in Geomechanics, 2006, 30, 1159-1172.	1.7	91
93	Two-scale shear band evolution by local partition of unity. International Journal for Numerical Methods in Engineering, 2006, 66, 878-910.	1.5	57
94	A method for dynamic crack and shear band propagation with phantom nodes. International Journal for Numerical Methods in Engineering, 2006, 67, 868-893.	1.5	628
95	Non-linear analysis of shells with arbitrary evolving cracks using XFEM. International Journal for Numerical Methods in Engineering, 2005, 62, 384-415.	1.5	149
96	Analysis of three-dimensional crack initiation and propagation using the extended finite element method. International Journal for Numerical Methods in Engineering, 2005, 63, 760-788.	1.5	323
97	A finite-strain quadrilateral shell element based on discrete Kirchhoff-Love constraints. International Journal for Numerical Methods in Engineering, 2005, 64, 1166-1206.	1.5	58
98	Strong displacement discontinuities and Lagrange multipliers in the analysis of finite displacement fracture problems. Computational Mechanics, 2004, 35, 54-71.	2.2	23
99	Algorithms for the analysis of 3D finite strain contact problems. International Journal for Numerical Methods in Engineering, 2004, 61, 1107-1151.	1.5	14
100	Analysis of 3D problems using a new enhanced strain hexahedral element. International Journal for Numerical Methods in Engineering, 2003, 58, 1637-1682.	1.5	86
101	A gradient model for finite strain elastoplasticity coupled with damage. Finite Elements in Analysis and Design, 2003, 39, 1191-1235.	1.7	37
102	Experimental and Finite Element Analysis of Human Skin Elasticity. , 2003, , 303.		2
103	Development of shear locking-free shell elements using an enhanced assumed strain formulation. International Journal for Numerical Methods in Engineering, 2002, 53, 1721-1750.	1.5	75
104	Quadrilateral elements for the solution of elasto-plastic finite strain problems. International Journal for Numerical Methods in Engineering, 2001, 51, 883-917.	1.5	24
105	Simulation of a Crack Detection Method for Concrete Structures using SH Waves. , 0, , .		0