Peter Wriggers

List of Publications by Year
in descending order

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499 papers	16,214 citations	15503 65 h-index	33889 99 g-index
525 all docs	525 docs citations	525 times ranked	6201 citing authors

#	Article	IF	Citations
1	Mesoscale models for concrete: Homogenisation and damage behaviour. Finite Elements in Analysis and Design, 2006, 42, 623-636.	3.2	573
2	Finite element formulation of large deformation impact-contact problems with friction. Computers and Structures, 1990, 37, 319-331.	4.4	363
3	A perturbed Lagrangian formulation for the finite element solution of contact problems. Computer Methods in Applied Mechanics and Engineering, 1985, 50, 163-180.	6.6	350
4	Finite element algorithms for contact problems. Archives of Computational Methods in Engineering, 1995, 2, 1-49.	10.2	246
5	Contact treatment in isogeometric analysis with NURBS. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 1100-1112.	6.6	236
6	A general procedure for the direct computation of turning and bifurcation points. International Journal for Numerical Methods in Engineering, 1990, 30, 155-176.	2.8	227
7	A large deformation frictional contact formulation using NURBSâ€based isogeometric analysis. International Journal for Numerical Methods in Engineering, 2011, 87, 1278-1300.	2.8	199
8	A virtual element method for contact. Computational Mechanics, 2016, 58, 1039-1050.	4.0	197
9	A note on tangent stiffness for fully nonlinear contact problems. Communications in Applied Numerical Methods, 1985, 1, 199-203.	0.5	184
10	Consistent linearization for path following methods in nonlinear fe analysis. Computer Methods in Applied Mechanics and Engineering, 1986, 59, 261-279.	6.6	169
11	Nichtlineare Finite-Element-Methoden. , 2001, , .		168
12	Frictionless 2D Contact formulations for finite deformations based on the mortar method. Computational Mechanics, 2005, 36, 226-244.	4.0	164
13	A new locking-free brick element technique for large deformation problems in elasticity. Computers and Structures, 2000, 75, 291-304.	4.4	153
14	A simple method for the calculation of postcritical branches. Engineering Computations, 1988, 5, 103-109.	1.4	152
15	A note on enhanced strain methods for large deformations. Computer Methods in Applied Mechanics and Engineering, 1996, 135, 201-209.	6.6	143
16	A stabilization technique to avoid hourglassing in finite elasticity. International Journal for Numerical Methods in Engineering, 2000, 48, 79-109.	2.8	140
17	A quadratically convergent procedure for the calculation of stability points in finite element analysis. Computer Methods in Applied Mechanics and Engineering, 1988, 70, 329-347.	6.6	134
18	Three-dimensional mortar-based frictional contact treatment in isogeometric analysis with NURBS. Computer Methods in Applied Mechanics and Engineering, 2012, 209-212, 115-128.	6.6	134

#	Article	IF	Citations
19	Automation of Finite Element Methods. , 2016, , .		131
20	A mortar formulation for 3D large deformation contact using NURBS-based isogeometric analysis and the augmented Lagrangian method. Computational Mechanics, 2012, 49, 1-20.	4.0	127
21	Finite element analysis of pile installation using large-slip frictional contact. Computers and Geotechnics, 2005, 32, 17-26.	4.7	124
22	Isogeometric contact: a review. GAMM Mitteilungen, 2014, 37, 85-123.	5.5	122
23	A contact detection algorithm for superellipsoids based on the commonâ€normal concept. Engineering Computations, 2008, 25, 432-442.	1.4	120
24	Arbitrary Lagrangian Eulerian finite element analysis of free surface flow. Computer Methods in Applied Mechanics and Engineering, 2000, 190, 95-109.	6.6	118
25	Efficient virtual element formulations for compressible and incompressible finite deformations. Computational Mechanics, 2017, 60, 253-268.	4.0	117
26	Real contact mechanisms and finite element formulationâ€”a coupled thermomechanical approach. International Journal for Numerical Methods in Engineering, 1992, 35, 767-785.	2.8	116
27	Mortar based frictional contact formulation for higher order interpolations using the moving friction cone. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 5020-5036.	6.6	116
28	Smooth C1â€interpolations for twoâ€dimensional frictional contact problems. International Journal for Numerical Methods in Engineering, 2001, 51, 1469-1495.	2.8	113
29	An interior-point algorithm for elastoplasticity. International Journal for Numerical Methods in Engineering, 2007, 69, 592-626.	2.8	113
30	Isogeometric large deformation frictionless contact using T-splines. Computer Methods in Applied Mechanics and Engineering, 2014, 269, 394-414.	6.6	113
31	Finite deformation post-buckling analysis involving inelasticity and contact constraints. International Journal for Numerical Methods in Engineering, 1986, 23, 779-800.	2.8	108
32	Numerical homogenization of hardened cement paste. Computational Mechanics, 2008, 42, 197-212.	4.0	108
33	ON CONTACT BETWEEN THREE-DIMENSIONAL BEAMS UNDERGOING LARGE DEFLECTIONS. Communications in Numerical Methods in Engineering, 1997, 13, 429-438.	1.3	107
34	Large strain analysis of soft biological membranes: Formulation and finite element analysis. Computer Methods in Applied Mechanics and Engineering, 1996, 132, 45-61.	6.6	105
35	Contact constraints within coupled thermomechanical analysisâ€”A finite element model. Computer Methods in Applied Mechanics and Engineering, 1994, 113, 301-319.	6.6	101
36	A two-scale model of granular materials. Computer Methods in Applied Mechanics and Engineering, 2012, 205-208, 46-58.	6.6	101

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37	A mortar-based frictional contact formulation for large deformations using Lagrange multipliers. Computer Methods in Applied Mechanics and Engineering, 2009, 198, 2860-2873.	6.6	100
38	Phase-field modeling of brittle fracture using an efficient virtual element scheme. Computer Methods in Applied Mechanics and Engineering, 2018, 341, 443-466.	6.6	98
39	Homogenization in finite thermoelasticity. Journal of the Mechanics and Physics of Solids, 2011, 59, 344-372.	4.8	97
40	A machine learning based plasticity model using proper orthogonal decomposition. Computer Methods in Applied Mechanics and Engineering, 2020, 365, 113008.	6.6	94
41	Contact with friction between beams in 3-D space. International Journal for Numerical Methods in Engineering, 2000, 49, 977-1006.	2.8	93
42	Finite element concepts for finite elastoplastic strains and isotropic stress response in shells: theoretical and computational analysis. Computer Methods in Applied Mechanics and Engineering, 1999, 171, 243-279.	6.6	92
43	A modified Gurson-type plasticity model at finite strains: formulation, numerical analysis and phase-field coupling. Computational Mechanics, 2018, 62, 815-833.	4.0	92
44	Variational phase-field formulation of non-linear ductile fracture. Computer Methods in Applied Mechanics and Engineering, 2018, 342, 71-94.	6.6	90
45	A segment-to-segment contact strategy. Mathematical and Computer Modelling, 1998, 28, 497-515.	2.0	86
46	Finite element modelling of orthotropic material behaviour in pneumatic membranes. International Journal of Solids and Structures, 2001, 38, 9525-9544.	2.7	86
47	Aspects of the computational testing of the mechanical properties of microheterogeneous material samples. International Journal for Numerical Methods in Engineering, 2001, 50, 2573-2599.	2.8	85
48	On the computation of the macroscopic tangent for multiscale volumetric homogenization problems. Computer Methods in Applied Mechanics and Engineering, 2008, 198, 495-510.	6.6	85
49	Application of augmented Lagrangian techniques for non-linear constitutive laws in contact interfaces. Communications in Numerical Methods in Engineering, 1993, 9, 815-824.	1.3	83
50	Multi-scale approach for frictional contact of elastomers on rough rigid surfaces. Computer Methods in Applied Mechanics and Engineering, 2009, 198, 1996-2008.	6.6	81
51	A two-level iteration method for solution of contact problems. Computer Methods in Applied Mechanics and Engineering, 1986, 54, 131-144.	6.6	80
52	Thin shells with finite rotations formulated in biot stresses: Theory and finite element formulation. International Journal for Numerical Methods in Engineering, 1993, 36, 2049-2071.	2.8	80
53	3D corrected XFEM approach and extension to finite deformation theory. International Journal for Numerical Methods in Engineering, 2011, 86, 431-452.	2.8	80
54	A C 1 -continuous formulation for 3D finite deformation frictional contact. Computational Mechanics, 2002, 29, 27-42.	4.0	79

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55	A stabilization technique to avoid hourglassing in finite elasticity. International Journal for Numerical Methods in Engineering, 2000, 48, 79-109.	2.8	79
56	A triangular finite shell element based on a fully nonlinear shell formulation. Computational Mechanics, 2003, 31, 505-518.	4.0	76
57	Theory and numerics of thin elastic shells with finite rotations. Ingenieur-Archiv, 1989, 59, 54-67.	0.6	74
58	NURBS- and T-spline-based isogeometric cohesive zone modeling of interface debonding. Computational Mechanics, 2014, 54, 369-388.	4.0	74
59	On the coupled thermomechanical treatment of necking problems via finite element methods. International Journal for Numerical Methods in Engineering, 1992, 33, 869-883.	2.8	73
60	Consistent gradient formulation for a stable enhanced strain method for large deformations. Engineering Computations, 1996, 13, 103-123.	1.4	73
61	On augmented Lagrangian algorithms for thermomechanical contact problems with friction. International Journal for Numerical Methods in Engineering, 1995, 38, 2929-2949.	2.8	72
62	An improved EAS brick element for finite deformation. Computational Mechanics, 2010, 46, 641-659.	4.0	71
63	A formulation for frictionless contact problems using a weak form introduced by Nitsche. Computational Mechanics, 2007, 41, 407-420.	4.0	70
64	Formulation and analysis of a three-dimensional finite element implementation for adhesive contact at the nanoscale. Computer Methods in Applied Mechanics and Engineering, 2009, 198, 3871-3883.	6.6	69
65	The neural particle method â€“ An updated Lagrangian physics informed neural network for computational fluid dynamics. Computer Methods in Applied Mechanics and Engineering, 2020, 368, 113127.	6.6	69
66	Polygonal finite element methods for contact-impact problems on non-conformal meshes. Computer Methods in Applied Mechanics and Engineering, 2014, 269, 198-221.	6.6	68
67	Phase-field modeling of porous-ductile fracture in non-linear thermo-elasto-plastic solids. Computer Methods in Applied Mechanics and Engineering, 2020, 361, 112730.	6.6	67
68	A comparison of three-dimensional continuum and shell elements for finite plasticity. International Journal of Solids and Structures, 1996, 33, 3309-3326.	2.7	66
69	An adaptive globalâ€“local approach for phase-field modeling of anisotropic brittle fracture. Computer Methods in Applied Mechanics and Engineering, 2020, 361, 112744.	6.6	66
70	On enhanced strain methods for small and finite deformations of solids. Computational Mechanics, 1996, 18, 413-428.	4.0	63
71	An adaptive method for homogenization in orthotropic nonlinear elasticity. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 3409-3423.	6.6	63
72	Homogenization of granular material modeled by a three-dimensional discrete element method. Computers and Geotechnics, 2008, 35, 394-405.	4.7	63

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73	A general phase-field model for fatigue failure in brittle and ductile solids. Computational Mechanics, 2021, 67, 1431-1452.	4.0	62
74	Computational micro-macro material testing. Archives of Computational Methods in Engineering, 2001, 8, 131-228.	10.2	61
75	A low order virtual element formulation for finite elasto-plastic deformations. Computer Methods in Applied Mechanics and Engineering, 2017, 327, 459-477.	6.6	60
76	A domain decomposition method for bodies with heterogeneous microstructure basedon material regularization. International Journal of Solids and Structures, 1999, 36, 2507-2525.	2.7	59
77	Multi-scale study of high-strength low-thermal-conductivity cement composites containing cenospheres. Cement and Concrete Composites, 2017, 80, 91-103.	10.7	59
78	A Virtual Element Method for 2D linear elastic fracture analysis. Computer Methods in Applied Mechanics and Engineering, 2018, 340, 366-395.	6.6	59
79	A new mixed finite element based on different approximations of the minors of deformation tensors. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 3583-3600.	6.6	58
80	A nonlocal cohesive zone model for finite thickness interfaces â€“ Part I: Mathematical formulation and validation with molecular dynamics. Computational Materials Science, 2011, 50, 1625-1633.	3.0	57
81	Computational homogenization of micro-structural damage due to frost in hardened cement paste. Finite Elements in Analysis and Design, 2008, 44, 233-244.	3.2	56
82	A method for solving contact problems. International Journal for Numerical Methods in Engineering, 1998, 42, 473-498.	2.8	55
83	Approximation of incompressible large deformation elastic problems: some unresolved issues. Computational Mechanics, 2013, 52, 1153-1167.	4.0	55
84	Computational thermal homogenization of concrete. Cement and Concrete Composites, 2013, 35, 59-70.	10.7	55
85	Frictional contact between 3D beams. Computational Mechanics, 2002, 28, 26-39.	4.0	54
86	A DEM-FEM Coupling Approach for the Direct Numerical Simulation of 3D Particulate Flows. Journal of Applied Mechanics, Transactions ASME, 2012, 79, .	2.2	54
87	VIRTUAL ELEMENT FORMULATION FOR PHASE-FIELD MODELING OF DUCTILE FRACTURE. International Journal for Multiscale Computational Engineering, 2019, 17, 181-200.	1.2	54
88	A note on the optimum choice for penalty parameters. Communications in Applied Numerical Methods, 1987, 3, 581-585.	0.5	53
89	An exact conserving algorithm for nonlinear dynamics with rotational DOFs and general hyperelasticity. Part 1: Rods. Computational Mechanics, 2008, 42, 715-732.	4.0	53
90	A nonlocal cohesive zone model for finite thickness interfaces â€“ Part II: FE implementation and application to polycrystalline materials. Computational Materials Science, 2011, 50, 1634-1643.	3.0	53

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91	Stiffness and strength of hierarchical polycrystalline materials with imperfect interfaces. Journal of the Mechanics and Physics of Solids, 2012, 60, 557-572.	4.8	53
92	Response of a nonlinear elastic general Cosserat brick element in simulations typically exhibiting locking and hourglassing. Computational Mechanics, 2005, 36, 255-265.	4.0	52
93	A multiscale contact homogenization technique for the modeling of third bodies in the contact interface. Computer Methods in Applied Mechanics and Engineering, 2008, 198, 377-396.	6.6	52
94	A numerical model for thermomechanical contact based on microscopic interface laws. Mechanics Research Communications, 1992, 19, 173-182.	1.8	51
95	Error estimation for crack simulations using the XFEM. International Journal for Numerical Methods in Engineering, 2012, 91, 1459-1474.	2.8	50
96	A master-surface to master-surface formulation for beam to beam contact. Part I: frictionless interaction. Computer Methods in Applied Mechanics and Engineering, 2016, 303, 400-429.	6.6	50
97	A material model for rubber-like polymers exhibiting plastic deformation: computational aspects and a comparison with experimental results. Computer Methods in Applied Mechanics and Engineering, 1997, 148, 279-298.	6.6	49
98	Adaptive Finite Elements for Elastic Bodies in Contact. SIAM Journal of Scientific Computing, 1999, 20, 1605-1626.	2.8	49
99	A globalâ€“local approach for hydraulic phase-field fracture in poroelastic media. Computers and Mathematics With Applications, 2021, 91, 99-121.	2.7	49
100	A fully nonâ€linear axisymmetrical membrane element for rubberâ€like materials. Engineering Computations, 1990, 7, 303-310.	1.4	48
101	Nonlinear Dynamics of Shells: Theory, Finite Element Formulation, and Integration Schemes. Nonlinear Dynamics, 1997, 13, 279-305.	5.2	48
102	Contact between 3D beams with rectangular cross-sections. International Journal for Numerical Methods in Engineering, 2002, 53, 2019-2041.	2.8	48
103	A computational framework for brittle crack-propagation based on efficient virtual element method. Finite Elements in Analysis and Design, 2019, 159, 15-32.	3.2	48
104	A note on finite-element implementation of pressure boundary loading. Communications in Applied Numerical Methods, 1991, 7, 513-525.	0.5	47
105	Multiscale diffusionâ€“thermalâ€“mechanical cohesive zone model for concrete. Computational Mechanics, 2015, 55, 999-1016.	4.0	47
106	A low order 3D virtual element formulation for finite elastoâ€“plastic deformations. Computational Mechanics, 2019, 63, 253-269.	4.0	47
107	IMPROVED ENHANCED STRAIN FOUR-NODE ELEMENT WITH TAYLOR EXPANSION OF THE SHAPE FUNCTIONS. International Journal for Numerical Methods in Engineering, 1997, 40, 407-421.	2.8	46
108	A computational study of interfacial debonding damage in fibrous composite materials. Computational Materials Science, 1998, 12, 39-56.	3.0	46

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109	A fully nonlinear multi-parameter shell model with thickness variation and a triangular shell finite element. Computational Mechanics, 2004, 34, 181.	4.0	45
110	A method of substructuring large-scale computational micromechanical problems. Computer Methods in Applied Mechanics and Engineering, 2001, 190, 5639-5656.	6.6	44
111	A new algorithm for numerical solution of 3D elastoplastic contact problems with orthotropic friction law. Computational Mechanics, 2004, 34, 1.	4.0	44
112	An adaptive multiscale method for crack propagation and crackâ€‰coalescence. International Journal for Numerical Methods in Engineering, 2013, 93, 23-51.	2.8	44
113	3D multiscale crack propagation using the XFEM applied to a gas turbine blade. Computational Mechanics, 2014, 53, 173-188.	4.0	43
114	An XFEM approach for modelling delamination in composite laminates. Composite Structures, 2016, 135, 353-364.	5.8	43
115	Generating virtual process maps of SLM using powder-scale SPH simulations. Computational Particle Mechanics, 2020, 7, 655-677.	3.0	43
116	A finite element method for stability problems in finite elasticity. International Journal for Numerical Methods in Engineering, 1995, 38, 1171-1200.	2.8	41
117	An adaptive multiscale resolution strategy for the finite deformation analysis of microheterogeneous structures. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 2639-2661.	6.6	41
118	A finite element method for contact using a third medium. Computational Mechanics, 2013, 52, 837-847.	4.0	41
119	A new axisymmetrical membrane element for anisotropic, finite strain analysis of arteries. Communications in Numerical Methods in Engineering, 1996, 12, 507-517.	1.3	40
120	Multiscale FEM approach for hysteresis friction of rubber on rough surfaces. Computer Methods in Applied Mechanics and Engineering, 2015, 296, 150-168.	6.6	40
121	Numerical derivation of contact mechanics interface laws using a finite element approach for large 3D deformation. International Journal for Numerical Methods in Engineering, 2004, 59, 173-195.	2.8	39
122	Comparison of the macroscopic behavior of granular materials modeled by different constitutive equations on the microscale. Finite Elements in Analysis and Design, 2008, 44, 259-271.	3.2	38
123	Computational homogenization of rubber friction on rough rigid surfaces. Computational Materials Science, 2013, 77, 264-280.	3.0	38
124	Computational and theoretical aspects of a grain-boundary model that accounts for grain misorientation and grain-boundary orientation. Computational Materials Science, 2016, 111, 443-459.	3.0	38
125	Processing and coating of open-pored absorbable magnesium-based bone implants. Materials Science and Engineering C, 2019, 98, 1073-1086.	7.3	38
126	Investigation of heat source modeling for selective laser melting. Computational Mechanics, 2019, 63, 949-970.	4.0	37

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127	Algorithms for non-linear contact constraints with application to stability problems of rods and shells. Computational Mechanics, 1987, 2, 215-230.	4.0	36
128	An exact conserving algorithm for nonlinear dynamics with rotational DOFs and general hyperelasticity. Part 2: shells. Computational Mechanics, 2011, 48, 195-211.	4.0	36
129	A novel mixed finite element for finite anisotropic elasticity; the SKA-element Simplified Kinematics for Anisotropy. Computer Methods in Applied Mechanics and Engineering, 2016, 310, 475-494.	6.6	36
130	A fatigue damage accumulation model for reliability analysis of engine components under combined cycle loadings. Fatigue and Fracture of Engineering Materials and Structures, 2020, 43, 1880-1892.	3.4	36
131	A Selection of Benchmark Problems in Solid Mechanics and Applied Mathematics. Archives of Computational Methods in Engineering, 2021, 28, 713-751.	10.2	36
132	An efficient 3D enhanced strain element with Taylor expansion of the shape functions. Computational Mechanics, 1996, 19, 30-40.	4.0	35
133	Random homogenization analysis in linear elasticity based on analytical bounds and estimates. International Journal of Solids and Structures, 2011, 48, 280-291.	2.7	35
134	Stochastic multiscale homogenization analysis of heterogeneous materials under finite deformations with full uncertainty in the microstructure. Computational Mechanics, 2015, 55, 819-835.	4.0	35
135	Self-contact modeling on beams experiencing loop formation. Computational Mechanics, 2015, 55, 193-208.	4.0	35
136	Computational homogenization of polycrystalline materials with the Virtual Element Method. Computer Methods in Applied Mechanics and Engineering, 2019, 355, 349-372.	6.6	35
137	Thermomechanical contactâ€"a rigorous but simple numerical approach. Computers and Structures, 1993, 46, 47-53.	4.4	34
138	A model for simulating the deterioration of structural-scale material responses of microheterogeneous solids. Computer Methods in Applied Mechanics and Engineering, 2001, 190, 2803-2823.	6.6	34
139	An energyâ€"momentum integration scheme and enhanced strain finite elements for the non-linear dynamics of shells. International Journal of Non-Linear Mechanics, 2002, 37, 951-966.	2.6	34
140	A finite deformation brick element with inhomogeneous mode enhancement. International Journal for Numerical Methods in Engineering, 2009, 78, 1164-1187.	2.8	34
141	Multiscale hydro-thermo-chemo-mechanical coupling: Application to alkaliâ€"silica reaction. Computational Materials Science, 2014, 84, 381-395.	3.0	34
142	A superlinear convergent augmented Lagrangian procedure for contact problems. Engineering Computations, 1999, 16, 88-119.	1.4	33
143	Finite strain response of crimped fibers under uniaxial traction: An analytical approach applied to collagen. Journal of the Mechanics and Physics of Solids, 2017, 98, 429-453.	4.8	33
144	Metal particle fusion analysis for additive manufacturing using the stabilized optimal transportation meshfree method. Computer Methods in Applied Mechanics and Engineering, 2018, 339, 91-114.	6.6	33

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145	A formulation for the 4-node quadrilateral element. International Journal for Numerical Methods in Engineering, 1995, 38, 3007-3037.	2.8	32
146	Development of a wrinkling algorithm for orthotropic membrane materials. Computer Methods in Applied Mechanics and Engineering, 2005, 194, 2550-2568.	6.6	32
147	A finite element model for contact analysis of multiple Cosserat bodies. Computational Mechanics, 2005, 36, 444-458.	4.0	32
148	Model-data-driven constitutive responses: Application to a multiscale computational framework. International Journal of Engineering Science, 2021, 167, 103522.	5.0	32
149	Different a posteriori error estimators and indicators for contact problems. Mathematical and Computer Modelling, 1998, 28, 437-447.	2.0	31
150	Thermo-mechanical behaviour of rubber materials during vulcanization. International Journal of Solids and Structures, 2005, 42, 4758-4778.	2.7	31
151	Degradation behaviour of LAE442-based plateâ€“screw-systems in an in vitro bone model. Materials Science and Engineering C, 2015, 49, 305-315.	7.3	31
152	Curvilinear virtual elements for contact mechanics. Computer Methods in Applied Mechanics and Engineering, 2020, 372, 113394.	6.6	31
153	Feed-Forward Neural Networks for Failure Mechanics Problems. Applied Sciences (Switzerland), 2021, 11, 6483.	2.5	31
154	On the adaptive finite element method of steady-state rolling contact for hyperelasticity in finite deformations. Computer Methods in Applied Mechanics and Engineering, 2002, 191, 1333-1348.	6.6	30
155	A master-surface to master-surface formulation for beam to beam contact. Part II: Frictional interaction. Computer Methods in Applied Mechanics and Engineering, 2017, 319, 146-174.	6.6	30
156	A nonlinear composite shell element with continuous interlaminar shear stresses. Computational Mechanics, 1993, 13, 175-188.	4.0	29
157	A description of macroscopic damage through microstructural relaxation. International Journal for Numerical Methods in Engineering, 1998, 43, 493-506.	2.8	29
158	Improved numerical algorithms for frictional contact in pile penetration analysis. Computers and Geotechnics, 2006, 33, 341-354.	4.7	29
159	Numerical multiscale modelling and experimental validation of low speed rubber friction on rough road surfaces including hysteretic and adhesive effects. Tribology International, 2017, 111, 243-253.	5.9	29
160	A nonlinear quadrilateral shell element with drilling degrees of freedom. Archive of Applied Mechanics, 1992, 62, 474-486.	2.2	28
161	Application of Frictional Contact in Geotechnical Engineering. International Journal of Geomechanics, 2007, 7, 176-185.	2.7	28
162	Efficient integration of crack singularities in the extended finite element method: Duffy-distance transformation and conformal preconditioning strategy. Computer Methods in Applied Mechanics and Engineering, 2018, 340, 559-576.	6.6	28

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163	Serendipity virtual element formulation for nonlinear elasticity. Computers and Structures, 2019, 223, 106094.	4.4	28
164	A new finite element based on the theory of a Cosserat pointâ€"extension to initially distorted elements for 2D plane strain. International Journal for Numerical Methods in Engineering, 2007, 71, 454-472.	2.8	27
165	An advanced abrasion model for tire wear. Wear, 2018, 396-397, 75-85.	3.1	27
166	Virtual elements for finite thermo-plasticity problems. Computational Mechanics, 2019, 64, 1347-1360.	4.0	27
167	Multilevel globalâ€"local techniques for adaptive ductile phase-field fracture. Computer Methods in Applied Mechanics and Engineering, 2021, 387, 114175.	6.6	27
168	Isogeometric symmetric Galerkin boundary element method for three-dimensional elasticity problems. Computer Methods in Applied Mechanics and Engineering, 2017, 323, 132-150.	6.6	26
169	Finite element methods for contact problems with friction. Tribology International, 1996, 29, 651-658.	5.9	25
170	On the design of energyâ€"momentum integration schemes for arbitrary continuum formulations. Applications to classical and chaotic motion of shells. International Journal for Numerical Methods in Engineering, 2004, 60, 2419-2440.	2.8	25
171	Thermal contact conductance characterization via computational contact homogenization: A finite deformation theory framework. International Journal for Numerical Methods in Engineering, 2010, 83, 27-58.	2.8	25
172	Virtual element formulation for isotropic damage. Finite Elements in Analysis and Design, 2018, 144, 38-48.	3.2	25
173	Efficient modeling of filled rubber assuming stress-induced microscopic restructurization. International Journal of Engineering Science, 2020, 151, 103291.	5.0	25
174	Stability of rods with unilateral constraints, a finite element solution. Computers and Structures, 1984, 19, 205-211.	4.4	24
175	Random homogenization analysis for heterogeneous materials with full randomness and correlation in microstructure based on finite element method and Monte-carlo method. Computational Mechanics, 2014, 54, 1395-1414.	4.0	24
176	Node-to-segment and node-to-surface interface finite elements for fracture mechanics. Computer Methods in Applied Mechanics and Engineering, 2016, 300, 540-560.	6.6	24
177	Stabilization algorithm for the optimal transportation meshfree approximation scheme. Computer Methods in Applied Mechanics and Engineering, 2018, 329, 421-443.	6.6	24
178	Sensitivity analysis for the mechanics of tendons and ligaments: Investigation on the effects of collagen structural properties via a multiscale modeling approach. International Journal for Numerical Methods in Biomedical Engineering, 2019, 35, e3209.	2.1	24
179	Peridynamic Petrovâ€"Galerkin method: A generalization of the peridynamic theory of correspondence materials. Computer Methods in Applied Mechanics and Engineering, 2020, 358, 112636.	6.6	24
180	A coverâ€based contact detection approach for irregular convex polygons in discontinuous deformation analysis. International Journal for Numerical and Analytical Methods in Geomechanics, 2021, 45, 208-233.	3.3	24

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181	On the optimality of the window method in computational homogenization. International Journal of Engineering Science, 2013, 64, 66-73.	5.0	23
182	Stochastic homogenized effective properties of three-dimensional composite material with full randomness and correlation in the microstructure. Computers and Structures, 2014, 144, 62-74.	4.4	23
183	Finite element formulations for large strain anisotropic material with inextensible fibers. Advanced Modeling and Simulation in Engineering Sciences, 2016, 3, .	1.7	23
184	A chemo-mechano-biological formulation for the effects of biochemical alterations on arterial mechanics: the role of molecular transport and multiscale tissue remodelling. Journal of the Royal Society Interface, 2017, 14, 20170615.	3.4	23
185	A combined adaptive phase field and discrete cutting method for the prediction of crack paths. Computer Methods in Applied Mechanics and Engineering, 2020, 372, 113329.	6.6	23
186	Bayesian inversion for unified ductile phase-field fracture. Computational Mechanics, 2021, 68, 943-980.	4.0	23
187	Calculation of impact-contact problems of thin elastic shells taking into account geometrical nonlinearities within the contact region. Computer Methods in Applied Mechanics and Engineering, 1982, 34, 861-880.	6.6	22
188	A FORMULATION OF THE QS6 ELEMENT FOR LARGE ELASTIC DEFORMATIONS. International Journal for Numerical Methods in Engineering, 1996, 39, 1437-1454.	2.8	22
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