

Stephane Bordas

List of Publications by Year in descending order

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196
papers

14,595
citations

16411

64
h-index

20900

115
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202
all docs

202
docs citations

202
times ranked

5466
citing authors

#	ARTICLE	IF	CITATIONS
1	Meshless methods: A review and computer implementation aspects. <i>Mathematics and Computers in Simulation</i> , 2008, 79, 763-813.	2.4	944
2	A simple and robust three-dimensional cracking-particle method without enrichment. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2010, 199, 2437-2455.	3.4	725
3	Isogeometric analysis: An overview and computer implementation aspects. <i>Mathematics and Computers in Simulation</i> , 2015, 117, 89-116.	2.4	478
4	A computational library for multiscale modeling of material failure. <i>Computational Mechanics</i> , 2014, 53, 1047-1071.	2.2	437
5	Three-dimensional crack initiation, propagation, branching and junction in non-linear materials by an extended meshfree method without asymptotic enrichment. <i>Engineering Fracture Mechanics</i> , 2008, 75, 943-960.	2.0	314
6	A three-dimensional meshfree method for continuous multiple-crack initiation, propagation and junction in statics and dynamics. <i>Computational Mechanics</i> , 2007, 40, 473-495.	2.2	312
7	On three-dimensional modelling of crack growth using partition of unity methods. <i>Computers and Structures</i> , 2010, 88, 1391-1411.	2.4	311
8	Isogeometric boundary element analysis using unstructured T-splines. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2013, 254, 197-221.	3.4	311
9	A smoothed finite element method for plate analysis. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008, 197, 1184-1203.	3.4	282
10	NURBS-based finite element analysis of functionally graded plates: Static bending, vibration, buckling and flutter. <i>Composite Structures</i> , 2013, 99, 309-326.	3.1	277
11	A geometrically non-linear three-dimensional cohesive crack method for reinforced concrete structures. <i>Engineering Fracture Mechanics</i> , 2008, 75, 4740-4758.	2.0	272
12	Strain smoothing in FEM and XFEM. <i>Computers and Structures</i> , 2010, 88, 1419-1443.	2.4	255
13	Phase-field modeling of fracture. <i>Advances in Applied Mechanics</i> , 2020, 53, 1-183.	1.4	241
14	An extended finite element library. <i>International Journal for Numerical Methods in Engineering</i> , 2007, 71, 703-732.	1.5	221
15	Isogeometric analysis using polynomial splines over hierarchical T-meshes for two-dimensional elastic solids. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2011, 200, 1892-1908.	3.4	221
16	A smoothed finite element method for shell analysis. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008, 198, 165-177.	3.4	199
17	An adaptive multiscale method for quasi-static crack growth. <i>Computational Mechanics</i> , 2014, 53, 1129-1148.	2.2	197
18	Isogeometric analysis of functionally graded carbon nanotube-reinforced composite plates using higher-order shear deformation theory. <i>Composite Structures</i> , 2015, 123, 137-149.	3.1	191

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19	Size-dependent free flexural vibration behavior of functionally graded nanoplates. <i>Computational Materials Science</i> , 2012, 65, 74-80.	1.4	186
20	Isogeometric boundary element methods for three dimensional static fracture and fatigue crack growth. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017, 316, 151-185.	3.4	181
21	Nitsche's method for two and three dimensional NURBS patch coupling. <i>Computational Mechanics</i> , 2014, 53, 1163-1182.	2.2	179
22	An adaptive singular ES-FEM for mechanics problems with singular field of arbitrary order. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2013, 253, 252-273.	3.4	178
23	Isogeometric locking-free plate element: A simple first order shear deformation theory for functionally graded plates. <i>Composite Structures</i> , 2014, 118, 121-138.	3.1	177
24	XLME interpolants, a seamless bridge between XFEM and enriched meshless methods. <i>Computational Mechanics</i> , 2014, 53, 45-57.	2.2	168
25	Numerical integration over arbitrary polygonal domains based on Schwarz's Christoffel conformal mapping. <i>International Journal for Numerical Methods in Engineering</i> , 2009, 80, 103-134.	1.5	158
26	On the performance of strain smoothing for quadratic and enriched finite element approximations (XFEM/GFEM/PUFEM). <i>International Journal for Numerical Methods in Engineering</i> , 2011, 86, 637-666.	1.5	142
27	Enriched finite elements and level sets for damage tolerance assessment of complex structures. <i>Engineering Fracture Mechanics</i> , 2006, 73, 1176-1201.	2.0	141
28	An isogeometric boundary element method for elastostatic analysis: 2D implementation aspects. <i>Computers and Structures</i> , 2013, 118, 2-12.	2.4	132
29	Real-time simulation of contact and cutting of heterogeneous soft-tissues. <i>Medical Image Analysis</i> , 2014, 18, 394-410.	7.0	131
30	A node-based smoothed finite element method with stabilized discrete shear gap technique for analysis of Reissner's Mindlin plates. <i>Computational Mechanics</i> , 2010, 46, 679-701.	2.2	128
31	Natural frequencies of cracked functionally graded material plates by the extended finite element method. <i>Composite Structures</i> , 2011, 93, 3082-3092.	3.1	128
32	A robust preconditioning technique for the extended finite element method. <i>International Journal for Numerical Methods in Engineering</i> , 2011, 85, 1609-1632.	1.5	127
33	Smooth finite element methods: Convergence, accuracy and properties. <i>International Journal for Numerical Methods in Engineering</i> , 2008, 74, 175-208.	1.5	126
34	Derivative recovery and a posteriori error estimate for extended finite elements. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2007, 196, 3381-3399.	3.4	121
35	Bridging proper orthogonal decomposition methods and augmented Newton's Krylov algorithms: An adaptive model order reduction for highly nonlinear mechanical problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2011, 200, 850-866.	3.4	118
36	Isogeometric Analysis of Laminated Composite Plates Using the Higher-Order Shear Deformation Theory. <i>Mechanics of Advanced Materials and Structures</i> , 2015, 22, 451-469.	1.5	117

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37	<i>a posteriori</i> error estimation for extended finite elements by an extended global recovery. International Journal for Numerical Methods in Engineering, 2008, 76, 1123-1138.	1.5	112
38	Shape optimization directly from CAD: An isogeometric boundary element approach using T-splines. Computer Methods in Applied Mechanics and Engineering, 2017, 317, 1-41.	3.4	112
39	A combined extended finite element and level set method for biofilm growth. International Journal for Numerical Methods in Engineering, 2008, 74, 848-870.	1.5	109
40	Modelling hydraulic fractures in porous media using flow cohesive interface elements. Engineering Geology, 2017, 225, 68-82.	2.9	105
41	Integrating strong and weak discontinuities without integration subcells and example applications in an XFEM/GFEM framework. International Journal for Numerical Methods in Engineering, 2010, 83, 269-294.	1.5	102
42	A partitioned model order reduction approach to rationalise computational expenses in nonlinear fracture mechanics. Computer Methods in Applied Mechanics and Engineering, 2013, 256, 169-188.	3.4	101
43	Implementation of regularized isogeometric boundary element methods for gradient-based shape optimization in two-dimensional linear elasticity. International Journal for Numerical Methods in Engineering, 2016, 106, 972-1017.	1.5	100
44	Accurate fracture modelling using meshless methods, the visibility criterion and level sets: Formulation and 2D modelling. International Journal for Numerical Methods in Engineering, 2011, 86, 249-268.	1.5	97
45	Weakening the tight coupling between geometry and simulation in isogeometric analysis: From sub- and super-geometric analysis to Geometry-Independent Field approximation (GIFT). International Journal for Numerical Methods in Engineering, 2018, 114, 1131-1159.	1.5	95
46	An efficient computational approach for control of nonlinear transient responses of smart piezoelectric composite plates. International Journal of Non-Linear Mechanics, 2015, 76, 190-202.	1.4	91
47	A simple error estimator for extended finite elements. Communications in Numerical Methods in Engineering, 2007, 24, 961-971.	1.3	88
48	A cell-based smoothed finite element method for kinematic limit analysis. International Journal for Numerical Methods in Engineering, 2010, 83, 1651-1674.	1.5	86
49	Constructing IGA-suitable planar parameterization from complex CAD boundary by domain partition and global/local optimization. Computer Methods in Applied Mechanics and Engineering, 2018, 328, 175-200.	3.4	86
50	Linear smoothed polygonal and polyhedral finite elements. International Journal for Numerical Methods in Engineering, 2017, 109, 1263-1288.	1.5	83
51	3D meso-scale modelling of foamed concrete based on X-ray Computed Tomography. Construction and Building Materials, 2018, 188, 583-598.	3.2	83
52	A Tutorial on Bayesian Inference to Identify Material Parameters in Solid Mechanics. Archives of Computational Methods in Engineering, 2020, 27, 361-385.	6.0	83
53	Acoustic topology optimization of sound absorbing materials directly from subdivision surfaces with isogeometric boundary element methods. Computer Methods in Applied Mechanics and Engineering, 2020, 362, 112806.	3.4	83
54	An experimental/numerical investigation into the main driving force for crack propagation in uni-directional fibre-reinforced composite laminae. Composite Structures, 2014, 107, 119-130.	3.1	81

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55	Finite element analysis on implicitly defined domains: An accurate representation based on arbitrary parametric surfaces. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2011, 200, 774-796.	3.4	80
56	MOLECULAR DYNAMICS/XFEM COUPLING BY A THREE-DIMENSIONAL EXTENDED BRIDGING DOMAIN WITH APPLICATIONS TO DYNAMIC BRITTLE FRACTURE. <i>International Journal for Multiscale Computational Engineering</i> , 2013, 11, 527-541.	0.8	77
57	Linear elastic fracture simulation directly from CAD: 2D NURBS-based implementation and role of tip enrichment. <i>International Journal of Fracture</i> , 2017, 204, 55-78.	1.1	76
58	Local/global model order reduction strategy for the simulation of quasi-brittle fracture. <i>International Journal for Numerical Methods in Engineering</i> , 2012, 89, 154-179.	1.5	73
59	A well-conditioned and optimally convergent XFEM for 3D linear elastic fracture. <i>International Journal for Numerical Methods in Engineering</i> , 2016, 105, 643-677.	1.5	72
60	Minimum energy multiple crack propagation. Part III: XFEM computer implementation and applications. <i>Engineering Fracture Mechanics</i> , 2018, 191, 257-276.	2.0	72
61	On the approximation in the smoothed finite element method (SFEM). <i>International Journal for Numerical Methods in Engineering</i> , 2010, 81, 660-670.	1.5	71
62	A meshless adaptive multiscale method for fracture. <i>Computational Materials Science</i> , 2015, 96, 382-395.	1.4	71
63	Stable 3D extended finite elements with higher order enrichment for accurate non planar fracture. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016, 306, 19-46.	3.4	69
64	Minimum energy multiple crack propagation. Part I: Theory and state of the art review. <i>Engineering Fracture Mechanics</i> , 2018, 191, 205-224.	2.0	69
65	Improving the conditioning of XFEM/GFEM for fracture mechanics problems through enrichment quasi-orthogonalization. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019, 346, 1051-1073.	3.4	68
66	Quantifying the uncertainty in a hyperelastic soft tissue model with stochastic parameters. <i>Applied Mathematical Modelling</i> , 2018, 62, 86-102.	2.2	67
67	Bayesian inference to identify parameters in viscoelasticity. <i>Mechanics of Time-Dependent Materials</i> , 2018, 22, 221-258.	2.3	65
68	Linear free flexural vibration of cracked functionally graded plates in thermal environment. <i>Computers and Structures</i> , 2011, 89, 1535-1546.	2.4	61
69	Two- and three-dimensional isogeometric cohesive elements for composite delamination analysis. <i>Composites Part B: Engineering</i> , 2014, 60, 193-212.	5.9	61
70	Stable 3D XFEM/vector level sets for non-planar 3D crack propagation and comparison of enrichment schemes. <i>International Journal for Numerical Methods in Engineering</i> , 2018, 113, 252-276.	1.5	61
71	An alternative alpha finite element method with discrete shear gap technique for analysis of isotropic Mindlin-Reissner plates. <i>Finite Elements in Analysis and Design</i> , 2011, 47, 519-535.	1.7	60
72	Extended finite element method for dynamic fracture of piezo-electric materials. <i>Engineering Fracture Mechanics</i> , 2012, 92, 19-31.	2.0	59

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73	Stochastic modelling of clay/epoxy nanocomposites. <i>Composite Structures</i> , 2014, 118, 241-249.	3.1	59
74	Virtual and smoothed finite elements: A connection and its application to polygonal/polyhedral finite element methods. <i>International Journal for Numerical Methods in Engineering</i> , 2015, 104, 1173-1199.	1.5	58
75	Minimum energy multiple crack propagation. Part-II: Discrete solution with XFEM. <i>Engineering Fracture Mechanics</i> , 2018, 191, 225-256.	2.0	58
76	Error-controlled adaptive extended finite element method for 3D linear elastic crack propagation. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017, 318, 319-348.	3.4	57
77	Linear buckling analysis of cracked plates by SFEM and XFEM. <i>Journal of Mechanics of Materials and Structures</i> , 2011, 6, 1213-1238.	0.4	56
78	Automatised selection of load paths to construct reduced-order models in computational damage micromechanics: from dissipation-driven random selection to Bayesian optimization. <i>Computational Mechanics</i> , 2016, 58, 213-234.	2.2	55
79	Multiple crack detection in 3D using a stable XFEM and global optimization. <i>Computational Mechanics</i> , 2018, 62, 835-852.	2.2	54
80	An alternative alpha finite element method (α -FEM) for crack propagation analysis using triangular meshes. <i>Journal of Computational and Applied Mathematics</i> , 2010, 233, 2112-2135.	1.1	53
81	Accelerating Monte Carlo estimation with derivatives of high-level finite element models. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017, 318, 917-936.	3.4	53
82	Real-Time Error Control for Surgical Simulation. <i>IEEE Transactions on Biomedical Engineering</i> , 2018, 65, 596-607.	2.5	52
83	Explicit finite deformation analysis of isogeometric membranes. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014, 277, 104-130.	3.4	51
84	XFEM modeling of multistage hydraulic fracturing in anisotropic shale formations. <i>Journal of Petroleum Science and Engineering</i> , 2018, 162, 801-812.	2.1	51
85	Effects of elastic strain energy and interfacial stress on the equilibrium morphology of misfit particles in heterogeneous solids. <i>Journal of the Mechanics and Physics of Solids</i> , 2013, 61, 1433-1445.	2.3	50
86	Skew-symmetric Nitsche's formulation in isogeometric analysis: Dirichlet and symmetry conditions, patch coupling and frictionless contact. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2018, 341, 188-220.	3.4	49
87	Linear smoothed extended finite element method for fatigue crack growth simulations. <i>Engineering Fracture Mechanics</i> , 2019, 206, 551-564.	2.0	49
88	A simulation-based design paradigm for complex cast components. <i>Engineering With Computers</i> , 2007, 23, 25-37.	3.5	46
89	Optimization of elastic properties and weaving patterns of woven composites. <i>Composite Structures</i> , 2013, 100, 575-591.	3.1	46
90	On the Convergence of Stresses in Fretting Fatigue. <i>Materials</i> , 2016, 9, 639.	1.3	44

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91	Adaptivity driven by recovery and residual-based error estimators for PHT-splines applied to time-harmonic acoustics. Computers and Mathematics With Applications, 2019, 77, 2369-2395.	1.4	44
92	Multiscale modeling of material failure: Theory and computational methods. Advances in Applied Mechanics, 2019, 52, 1-103.	1.4	41
93	Mesh adaptivity driven by goal-oriented locally equilibrated superconvergent patch recovery. Computational Mechanics, 2014, 53, 957-976.	2.2	40
94	Simple and extensible plate and shell finite element models through automatic code generation tools. Computers and Structures, 2018, 209, 163-181.	2.4	40
95	Uncertainty quantification of dry woven fabrics: A sensitivity analysis on material properties. Composite Structures, 2014, 116, 1-17.	3.1	36
96	DEFECT ENGINEERING OF 2D MONATOMIC-LAYER MATERIALS. Modern Physics Letters B, 2013, 27, 1330017.	1.0	35
97	Corotational cut finite element method for real-time surgical simulation: Application to needle insertion simulation. Computer Methods in Applied Mechanics and Engineering, 2019, 345, 183-211.	3.4	35
98	Certification of projection-based reduced order modelling in computational homogenisation by the constitutive relation error. International Journal for Numerical Methods in Engineering, 2014, 97, 395-422.	1.5	33
99	What makes Data Science different? A discussion involving Statistics2.0 and Computational Sciences. International Journal of Data Science and Analytics, 2018, 6, 167-175.	2.4	33
100	Probabilistic deep learning for real-time large deformation simulations. Computer Methods in Applied Mechanics and Engineering, 2022, 398, 115307.	3.4	33
101	Gradient plasticity crack tip characterization by means of the extended finite element method. Computational Mechanics, 2017, 59, 831-842.	2.2	32
102	A unified enrichment approach addressing blending and conditioning issues in enriched finite elements. Computer Methods in Applied Mechanics and Engineering, 2019, 349, 673-700.	3.4	32
103	Model I cohesive zone models of different rank coals. International Journal of Rock Mechanics and Minings Sciences, 2019, 115, 145-156.	2.6	32
104	Model order reduction accelerated Monte Carlo stochastic isogeometric method for the analysis of structures with high-dimensional and independent material uncertainties. Computer Methods in Applied Mechanics and Engineering, 2019, 349, 266-284.	3.4	32
105	A cell based smoothed finite element method for free vibration and buckling analysis of shells. KSCE Journal of Civil Engineering, 2011, 15, 347-361.	0.9	31
106	Strain smoothing for compressible and nearly-incompressible finite elasticity. Computers and Structures, 2017, 182, 540-555.	2.4	31
107	A Bayesian multiscale CNN framework to predict local stress fields in structures with microscale features. Computational Mechanics, 2022, 69, 733-766.	2.2	31
108	Analysis of composite plates by a unified formulation-cell based smoothed finite element method and field consistent elements. Composite Structures, 2013, 105, 75-81.	3.1	30

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109	Locally equilibrated stress recovery for goal oriented error estimation in the extended finite element method. <i>Computers and Structures</i> , 2015, 152, 1-10.	2.4	30
110	An extended finite element method (XFEM) for linear elastic fracture with smooth nodal stress. <i>Computers and Structures</i> , 2017, 179, 48-63.	2.4	30
111	Architecture tradeoffs of integrating a mesh generator to partition of unity enriched object-oriented finite element software. <i>European Journal of Computational Mechanics</i> , 2007, 16, 237-258.	0.6	29
112	Isogeometric analysis suitable trivariate NURBS representation of composite panels with a new offset algorithm. <i>CAD Computer Aided Design</i> , 2014, 55, 49-63.	1.4	29
113	Controlling the error on target motion through real-time mesh adaptation: Applications to deep brain stimulation. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2018, 34, e2958.	1.0	29
114	A cell-based smoothed finite element method for three dimensional solid structures. <i>KSCE Journal of Civil Engineering</i> , 2012, 16, 1230-1242.	0.9	28
115	The virtual node polygonal element method for nonlinear thermal analysis with application to hybrid laser welding. <i>International Journal of Heat and Mass Transfer</i> , 2013, 67, 1247-1254.	2.5	28
116	Crack growth calculations in solder joints based on microstructural phenomena with X-FEM. <i>Computational Materials Science</i> , 2011, 50, 1145-1156.	1.4	27
117	Quasicontinuum-based multiscale approaches for plate-like beam lattices experiencing in-plane and out-of-plane deformation. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014, 279, 348-378.	3.4	27
118	On the role of enrichment and statical admissibility of recovered fields in a posteriori error estimation for enriched finite element methods. <i>Engineering Computations</i> , 2012, 29, 814-841.	0.7	26
119	Linear smoothed extended finite element method. <i>International Journal for Numerical Methods in Engineering</i> , 2017, 112, 1733-1749.	1.5	26
120	A linear smoothed quadratic finite element for the analysis of laminated composite Reissner-Mindlin plates. <i>Composite Structures</i> , 2017, 180, 395-411.	3.1	26
121	A unified polygonal locking-free thin/thick smoothed plate element. <i>Composite Structures</i> , 2019, 219, 147-157.	3.1	26
122	An nth high order perturbation-based stochastic isogeometric method and implementation for quantifying geometric uncertainty in shell structures. <i>Advances in Engineering Software</i> , 2020, 148, 102866.	1.8	26
123	A hybrid smoothed extended finite element/level set method for modeling equilibrium shapes of nano-inhomogeneities. <i>Computational Mechanics</i> , 2013, 52, 1417-1428.	2.2	25
124	Interfacial shear stress optimization in sandwich beams with polymeric core using non-uniform distribution of reinforcing ingredients. <i>Composite Structures</i> , 2015, 120, 221-230.	3.1	25
125	Numerically determined enrichment functions for the extended finite element method and applications to bi-material anisotropic fracture and polycrystals. <i>International Journal for Numerical Methods in Engineering</i> , 2010, 83, 805-828.	1.5	24
126	Efficient recovery-based error estimation for the smoothed finite element method for smooth and singular linear elasticity. <i>Computational Mechanics</i> , 2013, 52, 37-52.	2.2	24

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127	Fracture mechanism simulation of inhomogeneous anisotropic rocks by extended finite element method. <i>Theoretical and Applied Fracture Mechanics</i> , 2019, 104, 102359.	2.1	24
128	Uncertainty quantification of spatially uncorrelated loads with a reduced-order stochastic isogeometric method. <i>Computational Mechanics</i> , 2021, 67, 1255-1271.	2.2	24
129	Vibration of Functionally Graded Material Plates with Cutouts & Cracks in Thermal Environment. <i>Key Engineering Materials</i> , 0, 560, 157-180.	0.4	23
130	Probabilistic multiconstraints optimization of cooling channels in ceramic matrix composites. <i>Composites Part B: Engineering</i> , 2015, 81, 107-119.	5.9	23
131	Modelling interfacial cracking with non-matching cohesive interface elements. <i>Computational Mechanics</i> , 2016, 58, 731-746.	2.2	23
132	A fully smoothed XFEM for analysis of axisymmetric problems with weak discontinuities. <i>International Journal for Numerical Methods in Engineering</i> , 2017, 110, 203-226.	1.5	23
133	Isogeometric analysis of thin Reissner-Mindlin shells: locking phenomena and B-bar method. <i>Computational Mechanics</i> , 2020, 65, 1323-1341.	2.2	23
134	Numerical Analysis of the Inclusion-Crack Interaction by the Extended Finite Element Method. <i>International Journal for Computational Methods in Engineering Science and Mechanics</i> , 2014, 15, 26-32.	1.4	22
135	Equilibrium morphology of misfit particles in elastically stressed solids under chemo-mechanical equilibrium conditions. <i>Journal of the Mechanics and Physics of Solids</i> , 2015, 81, 1-21.	2.3	22
136	Scale selection in nonlinear fracture mechanics of heterogeneous materials. <i>Philosophical Magazine</i> , 2015, 95, 3328-3347.	0.7	21
137	Weak and strong form meshless methods for linear elastic problem under fretting contact conditions. <i>Tribology International</i> , 2019, 138, 392-402.	3.0	21
138	Programming the material point method in Julia. <i>Advances in Engineering Software</i> , 2017, 105, 17-29.	1.8	20
139	A gradient weighted extended finite element method (GW-XFEM) for fracture mechanics. <i>Acta Mechanica</i> , 2019, 230, 2385-2398.	1.1	20
140	Taylor-Series Expansion Based Numerical Methods: A Primer, Performance Benchmarking and New Approaches for Problems with Non-smooth Solutions. <i>Archives of Computational Methods in Engineering</i> , 2020, 27, 1465-1513.	6.0	20
141	A fast, certified and tuning free two-field reduced basis method for the metamodelling of affinely-parametrised elasticity problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016, 298, 121-158.	3.4	18
142	Guaranteed error bounds in homogenisation: an optimum stochastic approach to preserve the numerical separation of scales. <i>International Journal for Numerical Methods in Engineering</i> , 2017, 110, 103-132.	1.5	18
143	A new locking-free polygonal plate element for thin and thick plates based on Reissner-Mindlin plate theory and assumed shear strain fields. <i>Computers and Structures</i> , 2019, 220, 32-42.	2.4	18
144	B-Spline FEM for Time-Harmonic Acoustic Scattering and Propagation. <i>Journal of Theoretical and Computational Acoustics</i> , 2019, 27, 1850059.	0.5	18

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145	An Algorithm to compute damage from load in composites. <i>Frontiers of Architecture and Civil Engineering in China</i> , 2011, 5, 180-193.	0.4	17
146	STATISTICAL EXTRACTION OF PROCESS ZONES AND REPRESENTATIVE SUBSPACES IN FRACTURE OF RANDOM COMPOSITES. <i>International Journal for Multiscale Computational Engineering</i> , 2013, 11, 253-287.	0.8	17
147	An efficient goal-oriented sampling strategy using reduced basis method for parametrized elastodynamic problems. <i>Numerical Methods for Partial Differential Equations</i> , 2015, 31, 575-608.	2.0	16
148	Numerical evaluation of buckling behaviour induced by compression on patch-repaired composites. <i>Composite Structures</i> , 2017, 168, 582-596.	3.1	16
149	Fundamental solutions and dual boundary element methods for fracture in plane Cosserat elasticity. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2015, 471, 20150216.	1.0	15
150	Micro-structured materials: Inhomogeneities and imperfect interfaces in plane micropolar elasticity, a boundary element approach. <i>Engineering Analysis With Boundary Elements</i> , 2017, 83, 195-203.	2.0	15
151	Parametrized reduced order modeling for cracked solids. <i>International Journal for Numerical Methods in Engineering</i> , 2020, 121, 4537-4565.	1.5	15
152	Resolving high frequency issues via proper orthogonal decomposition based dynamic isogeometric analysis for structures with dissimilar materials. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 359, 112753.	3.4	14
153	Adaptive enriched geometry independent field approximation for 2D time-harmonic acoustics. <i>Computers and Structures</i> , 2022, 263, 106728.	2.4	14
154	Analysis of composite plates through cell-based smoothed finite element and 4-noded mixed interpolation of tensorial components techniques. <i>Computers and Structures</i> , 2014, 135, 83-87.	2.4	13
155	<p></p>Robotically Steered Needles: A Survey of Neurosurgical Applications and Technical Innovations</p>. <i>Robotic Surgery (Auckland)</i> , 2020, Volume 7, 1-23.	1.3	12
156	A unified algorithm for the selection of collocation stencils for convex, concave, and singular problems. <i>International Journal for Numerical Methods in Engineering</i> , 2021, 122, 4292-4312.	1.5	12
157	Calculating the Malliavin derivative of some stochastic mechanics problems. <i>PLoS ONE</i> , 2017, 12, e0189994.	1.1	12
158	Enriched finite elements for branching cracks in deformable porous media. <i>Engineering Analysis With Boundary Elements</i> , 2015, 50, 435-446.	2.0	11
159	An implicit potential method along with a meshless technique for incompressible fluid flows for regular and irregular geometries in 2D and 3D. <i>Engineering Analysis With Boundary Elements</i> , 2017, 77, 97-111.	2.0	11
160	A one point integration rule over star convex polytopes. <i>Computers and Structures</i> , 2019, 215, 43-64.	2.4	11
161	Bayesian model uncertainty quantification for hyperelastic soft tissue models. <i>Data-Centric Engineering</i> , 2021, 2, .	1.2	11
162	Crack detection in Mindlin-Reissner plates under dynamic loads based on fusion of data and models. <i>Computers and Structures</i> , 2021, 246, 106475.	2.4	11

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163	Electromechanical properties identification for groups of piezoelectric energy harvester based on Bayesian inference. <i>Mechanical Systems and Signal Processing</i> , 2022, 162, 108034.	4.4	11
164	Stress analysis without meshing: isogeometric boundary-element method. <i>Proceedings of the Institution of Civil Engineers: Engineering and Computational Mechanics</i> , 2013, 166, 88-99.	0.4	10
165	Analysis using higher-order XFEM: implicit representation of geometrical features from a given parametric representation. <i>Mechanics and Industry</i> , 2014, 15, 443-448.	0.5	10
166	A linear smoothed higher-order CS-FEM for the analysis of notched laminated composites. <i>Engineering Analysis With Boundary Elements</i> , 2017, 85, 127-135.	2.0	10
167	A rigged model of the breast for preoperative surgical planning. <i>Journal of Biomechanics</i> , 2021, 128, 110645.	0.9	10
168	A cut finite element method for spatially resolved energy metabolism models in complex neuro-cell morphologies with minimal remeshing. <i>Advanced Modeling and Simulation in Engineering Sciences</i> , 2021, 8, .	0.7	9
169	Inverse deformation analysis: an experimental and numerical assessment using the FEniCS Project. <i>Engineering With Computers</i> , 2022, 38, 4099-4113.	3.5	9
170	Cortex tissue relaxation and slow to medium load rates dependency can be captured by a two-phase flow poroelastic model. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022, 126, 104952.	1.5	8
171	Influence of the microstructure on the stress state of solder joints during thermal cycling. , 2009, , .		7
172	Generalized quasicontinuum modeling of metallic lattices with geometrical and material nonlinearity and variability. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 366, 112878.	3.4	7
173	Error estimation for the polygonal finite element method for smooth and singular linear elasticity. <i>Computers and Mathematics With Applications</i> , 2021, 92, 109-119.	1.4	7
174	Well Conditioned Extended Finite Elements and Vector Level Sets for Three-Dimensional Crack Propagation. <i>Lecture Notes in Computational Science and Engineering</i> , 2017, , 307-329.	0.1	7
175	Enriched residual free bubbles for semiconductor device simulation. <i>Computational Mechanics</i> , 2012, 50, 119-133.	2.2	6
176	An adapted deflated conjugate gradient solver for robust extended/generalised finite element solutions of large scale, 3D crack propagation problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2022, 395, 114937.	3.4	6
177	Three-dimensional non-linear fracture mechanics by enriched meshfree methods without asymptotic enrichment. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2007, , 21-36.	0.1	5
178	A Staggered Cell-Centered Finite Element Method for Compressible and Nearly-Incompressible Linear Elasticity on General Meshes. <i>SIAM Journal on Numerical Analysis</i> , 2015, 53, 2051-2073.	1.1	5
179	Treatment of multiple input uncertainties using the scaled boundary finite element method. <i>Applied Mathematical Modelling</i> , 2021, 99, 538-554.	2.2	5
180	Lifetime prediction for solder joints with the extended finite element method. , 2011, , .		4

#	ARTICLE	IF	CITATIONS
181	On the effect of grains interface parameters on the macroscopic properties of polycrystalline materials. Computers and Structures, 2018, 196, 355-368.	2.4	4
182	A Developed Damage Constitutive Model for Circular Steel Tubes of Reticulated Shells. International Journal of Structural Stability and Dynamics, 2020, 20, 2050106.	1.5	4
183	A Stochastic Galerkin Cell-based Smoothed Finite Element Method (SGCS-FEM). International Journal of Computational Methods, 2020, 17, 1950054.	0.8	3
184	Damage-Plastic Constitutive Model of Thin-Walled Circular Steel Tubes for Space Structures. Journal of Engineering Mechanics - ASCE, 2020, 146, 04020131.	1.6	3
185	Circumferential crack modeling of thin cylindrical shells in modal deformation. European Journal of Mechanics, A/Solids, 2021, 90, 104360.	2.1	3
186	Isogeometric finite element analysis using polynomial splines over hierarchical T-meshes. IOP Conference Series: Materials Science and Engineering, 2010, 10, 012238.	0.3	2
187	Computational Methods for Fracture. Mathematical Problems in Engineering, 2014, 2014, 1-2.	0.6	2
188	Autonomous model-based assessment of mechanical failures of reconfigurable modular robots with a Conjugate Gradient solver. , 2020, , .		2
189	An Element Nodal Force-based Large Increment Method for Elastoplasticity. , 2010, , .		1
190	Advances in finite element analysis for computational mechanics 2015. Advances in Mechanical Engineering, 2015, 7, 168781401559573.	0.8	1
191	A MINI element over star convex polytopes. Finite Elements in Analysis and Design, 2020, 172, 103368.	1.7	1
192	Seismic Performance of Kiewitt-Sunflower Single Layer Spherical Reticulated Shells. KSCE Journal of Civil Engineering, 2022, 26, 2354-2368.	0.9	1
193	Mechanical Failure in Microstructural Heterogeneous Materials. Lecture Notes in Computer Science, 2007, , 533-541.	1.0	0
194	On the Structure of a New Superhard Hexagonal Carbon Phase. , 2010, , .		0
195	A force-based large increment method for 2D continuum solids and the mesh convergence study. , 2012, , .		0
196	Cutting in Real Time in Corotational Elasticity and Perspectives on Simulating Cuts. , 2013, , 3-5.		0