StÃ©phane P.A. BORDAS

List of Publications by Year
in descending order

341 papers	20,096 citations	10956 71 h-index	14702 127 g-index
356 all docs	356 docs citations	356 times ranked	7617 citing authors

#	Article	IF	Citations
1	Meshless methods: A review and computer implementation aspects. Mathematics and Computers in Simulation, 2008, 79, 763-813.	2.4	944
2	A simple and robust three-dimensional cracking-particle method without enrichment. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 2437-2455.	3.4	725
3	Isogeometric analysis: An overview and computer implementation aspects. Mathematics and Computers in Simulation, 2015, 117, 89-116.	2.4	478
4	A computational library for multiscale modeling of material failure. Computational Mechanics, 2014, 53, 1047-1071.	2.2	437
5	Real-time Volumetric Deformable Models for Surgery Simulation using Finite Elements and Condensation. Computer Graphics Forum, 1996, 15, 57-66.	1.8	376
6	A hybrid elastic model for real-time cutting, deformations, and force feedback for surgery training and simulation. Visual Computer, 2000, 16, 437-452.	2.5	363
7	Three-dimensional crack initiation, propagation, branching and junction in non-linear materials by an extended meshfree method without asymptotic enrichment. Engineering Fracture Mechanics, 2008, 75, 943-960.	2.0	314
8	A three-dimensional meshfree method for continuous multiple-crack initiation, propagation and junction in statics and dynamics. Computational Mechanics, 2007, 40, 473-495.	2.2	312
9	On three-dimensional modelling of crack growth using partition of unity methods. Computers and Structures, 2010, 88, 1391-1411.	2.4	311
10	Isogeometric boundary element analysis using unstructured T-splines. Computer Methods in Applied Mechanics and Engineering, 2013, 254, 197-221.	3.4	311
11	A two-dimensional Isogeometric Boundary Element Method for elastostatic analysis. Computer Methods in Applied Mechanics and Engineering, 2012, 209-212, 87-100.	3.4	295
12	A smoothed finite element method for plate analysis. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 1184-1203.	3.4	282
13	NURBS-based finite element analysis of functionally graded plates: Static bending, vibration, buckling and flutter. Composite Structures, 2013, 99, 309-326.	3.1	277
14	A geometrically non-linear three-dimensional cohesive crack method for reinforced concrete structures. Engineering Fracture Mechanics, 2008, 75, 4740-4758.	2.0	272
15	Isogeometric analysis of laminated composite and sandwich plates using a new inverse trigonometric shear deformation theory. European Journal of Mechanics, A/Solids, 2014, 43, 89-108.	2.1	260
16	Strain smoothing in FEM and XFEM. Computers and Structures, 2010, 88, 1419-1443.	2.4	255
17	Phase-field modeling of fracture. Advances in Applied Mechanics, 2020, 53, 1-183.	1.4	241
18	SOFA: A Multi-Model Framework for Interactive Physical Simulation. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2012, , 283-321.	0.7	223

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19	A refined quasi-3D isogeometric analysis for functionally graded microplates based on the modified couple stress theory. Computer Methods in Applied Mechanics and Engineering, 2017, 313, 904-940.	3.4	222
20	An extended finite element library. International Journal for Numerical Methods in Engineering, 2007, 71, 703-732.	1.5	221
21	Isogeometric analysis using polynomial splines over hierarchical T-meshes for two-dimensional elastic solids. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 1892-1908.	3.4	221
22	A smoothed finite element method for shell analysis. Computer Methods in Applied Mechanics and Engineering, 2008, 198, 165-177.	3.4	199
23	An adaptive multiscale method for quasi-static crack growth. Computational Mechanics, 2014, 53, 1129-1148.	2.2	197
24	Extended finite element method with edge-based strain smoothing (ESm-XFEM) for linear elastic crack growth. Computer Methods in Applied Mechanics and Engineering, 2012, 209-212, 250-265.	3.4	193
25	Isogeometric analysis of functionally graded carbon nanotube-reinforced composite plates using higher-order shear deformation theory. Composite Structures, 2015, 123, 137-149.	3.1	191
26	Size-dependent free flexural vibration behavior of functionally graded nanoplates. Computational Materials Science, 2012, 65, 74-80.	1.4	186
27	Isogeometric boundary element methods for three dimensional static fracture and fatigue crack growth. Computer Methods in Applied Mechanics and Engineering, 2017, 316, 151-185.	3.4	181
28	Nitscheâ€™s method for two and three dimensional NURBS patch coupling. Computational Mechanics, 2014, 53, 1163-1182.	2.2	179
29	An adaptive singular ES-FEM for mechanics problems with singular field of arbitrary order. Computer Methods in Applied Mechanics and Engineering, 2013, 253, 252-273.	3.4	178
30	Isogeometric locking-free plate element: A simple first order shear deformation theory for functionally graded plates. Composite Structures, 2014, 118, 121-138.	3.1	177
31	XLME interpolants, a seamless bridge between XFEM and enriched meshless methods. Computational Mechanics, 2014, 53, 45-57.	2.2	168
32	Deep neural network with highâ€order neuron for the prediction of foamed concrete strength. Computer-Aided Civil and Infrastructure Engineering, 2019, 34, 316-332.	6.3	167
33	Numerical integration over arbitrary polygonal domains based on Schwarzâ€“Christoffel conformal mapping. International Journal for Numerical Methods in Engineering, 2009, 80, 103-134.	1.5	158
34	Isogeometric analysis of functionally graded plates using a refined plate theory. Composites Part B: Engineering, 2014, 64, 222-234.	5.9	146
35	On the performance of strain smoothing for quadratic and enriched finite element approximations (XFEM/GFEM/PUFEM). International Journal for Numerical Methods in Engineering, 2011, 86, 637-666.	1.5	142
36	Enriched finite elements and level sets for damage tolerance assessment of complex structures. Engineering Fracture Mechanics, 2006, 73, 1176-1201.	2.0	141

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37	An isogeometric boundary element method for elastostatic analysis: 2D implementation aspects. Computers and Structures, 2013, 118, 2-12.	2.4	132
38	GPU-based real-time soft tissue deformation with cutting and haptic feedback. Progress in Biophysics and Molecular Biology, 2010, 103, 159-168.	1.4	131
39	Real-time simulation of contact and cutting of heterogeneous soft-tissues. Medical Image Analysis, 2014, 18, 394-410.	7.0	131
40	A node-based smoothed finite element method with stabilized discrete shear gap technique for analysis of Reissnerâ€"Mindlin plates. Computational Mechanics, 2010, 46, 679-701.	2.2	128
41	Natural frequencies of cracked functionally graded material plates by the extended finite element method. Composite Structures, 2011, 93, 3082-3092.	3.1	128
42	A robust preconditioning technique for the extended finite element method. International Journal for Numerical Methods in Engineering, 2011, 85, 1609-1632.	1.5	127
43	Smooth finite element methods: Convergence, accuracy and properties. International Journal for Numerical Methods in Engineering, 2008, 74, 175-208.	1.5	126
44	Derivative recovery and a posteriori error estimate for extended finite elements. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 3381-3399.	3.4	121
45	A review of the scaled boundary finite element method for two-dimensional linear elastic fracture mechanics. Engineering Fracture Mechanics, 2018, 187, 45-73.	2.0	120
46	Bridging proper orthogonal decomposition methods and augmented Newtonâ€"Krylov algorithms: An adaptive model order reduction for highly nonlinear mechanical problems. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 850-866.	3.4	118
47	Isogeometric Analysis of Laminated Composite Plates Using the Higher-Order Shear Deformation Theory. Mechanics of Advanced Materials and Structures, 2015, 22, 451-469.	1.5	117
48	<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
49	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
50	Structural shape optimization of three dimensional acoustic problems with isogeometric boundary element methods. Computer Methods in Applied Mechanics and Engineering, 2019, 355, 926-951.	3.4	111
51	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
52	Modelling hydraulic fractures in porous media using flow cohesive interface elements. Engineering Geology, 2017, 225, 68-82.	2.9	105
53	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
54	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

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55	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
56	The influence of fracture geometry variation on non-Darcy flow in fractures under confining stresses. International Journal of Rock Mechanics and Minings Sciences, 2019, 113, 59-71.	2.6	98
57	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
58	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
59	Patient-Specific Biomechanical Modeling for Guidance During Minimally-Invasive Hepatic Surgery. Annals of Biomedical Engineering, 2016, 44, 139-153.	1.3	94
60	Image-guided simulation of heterogeneous tissue deformation for augmented reality during hepatic surgery. , 2013, , .		93
61	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
62	A simple error estimator for extended finite elements. Communications in Numerical Methods in Engineering, 2007, 24, 961-971.	1.3	88
63	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
64	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
65	Linear smoothed polygonal and polyhedral finite elements. International Journal for Numerical Methods in Engineering, 2017, 109, 1263-1288.	1.5	83
66	3D meso-scale modelling of foamed concrete based on X-ray Computed Tomography. Construction and Building Materials, 2018, 188, 583-598.	3.2	83
67	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
68	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
69	Advances in Carbon Based Nanomaterials for Bio-Medical Applications. Current Medicinal Chemistry, 2019, 26, 6851-6877.	1.2	82
70	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
71	Finite element analysis on implicitly defined domains: An accurate representation based on arbitrary parametric surfaces. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 774-796.	3.4	80
72	Isogeometric analysis enhanced by the scaled boundary finite element method. Computer Methods in Applied Mechanics and Engineering, 2015, 283, 733-762.	3.4	80

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73	MOLECULAR DYNAMICS/XFEM COUPLING BY A THREE-DIMENSIONAL EXTENDED BRIDGING DOMAIN WITH APPLICATIONS TO DYNAMIC BRITTLE FRACTURE. International Journal for Multiscale Computational Engineering, 2013, 11, 527-541.	0.8	77
74	Linear elastic fracture simulation directly from CAD: 2D NURBS-based implementation and role of tip enrichment. International Journal of Fracture, 2017, 204, 55-78.	1.1	76
75	Local/global model order reduction strategy for the simulation of quasiâ€brittle fracture. International Journal for Numerical Methods in Engineering, 2012, 89, 154-179.	1.5	73
76	Convergence and accuracy of displacement based finite element formulations over arbitrary polygons: Laplace interpolants, strain smoothing and scaled boundary polygon formulation. Finite Elements in Analysis and Design, 2014, 85, 101-122.	1.7	72
77	A wellâ€conditioned and optimally convergent XFEM for 3D linear elastic fracture. International Journal for Numerical Methods in Engineering, 2016, 105, 643-677.	1.5	72
78	Minimum energy multiple crack propagation. Part III: XFEM computer implementation and applications. Engineering Fracture Mechanics, 2018, 191, 257-276.	2.0	72
79	On the approximation in the smoothed finite element method (SFEM). International Journal for Numerical Methods in Engineering, 2010, 81, 660-670.	1.5	71
80	A meshless adaptive multiscale method for fracture. Computational Materials Science, 2015, 96, 382-395.	1.4	71
81	Stable 3D extended finite elements with higher order enrichment for accurate non planar fracture. Computer Methods in Applied Mechanics and Engineering, 2016, 306, 19-46.	3.4	69
82	Minimum energy multiple crack propagation. Part I: Theory and state of the art review. Engineering Fracture Mechanics, 2018, 191, 205-224.	2.0	69
83	Improving the conditioning of XFEM/GFEM for fracture mechanics problems through enrichment quasi-orthogonalization. Computer Methods in Applied Mechanics and Engineering, 2019, 346, 1051-1073.	3.4	68
84	Quantifying the uncertainty in a hyperelastic soft tissue model with stochastic parameters. Applied Mathematical Modelling, 2018, 62, 86-102.	2.2	67
85	Identifying elastoplastic parameters with Bayesâ€™ theorem considering output error, input error and model uncertainty. Probabilistic Engineering Mechanics, 2019, 55, 28-41.	1.3	66
86	Bayesian inference to identify parameters in viscoelasticity. Mechanics of Time-Dependent Materials, 2018, 22, 221-258.	2.3	65
87	Hygrothermal effects on the free vibration and buckling of laminated composites with cutouts. Composite Structures, 2014, 108, 848-855.	3.1	63
88	Linear free flexural vibration of cracked functionally graded plates in thermal environment. Computers and Structures, 2011, 89, 1535-1546.	2.4	61
89	Two- and three-dimensional isogeometric cohesive elements for composite delamination analysis. Composites Part B: Engineering, 2014, 60, 193-212.	5.9	61
90	Stable 3D XFEM/vector level sets for nonâ€planar 3D crack propagation and comparison of enrichment schemes. International Journal for Numerical Methods in Engineering, 2018, 113, 252-276.	1.5	61

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91	An alternative alpha finite element method with discrete shear gap technique for analysis of isotropic Mindlinâ€"Reissner plates. Finite Elements in Analysis and Design, 2011, 47, 519-535.	1.7	60
92	Extended finite element method for dynamic fracture of piezo-electric materials. Engineering Fracture Mechanics, 2012, 92, 19-31.	2.0	59
93	Stochastic modelling of clay/epoxy nanocomposites. Composite Structures, 2014, 118, 241-249.	3.1	59
94	Virtual and smoothed finite elements: A connection and its application to polygonal/polyhedral finite element methods. International Journal for Numerical Methods in Engineering, 2015, 104, 1173-1199.	1.5	58
95	Minimum energy multiple crack propagation. Part-II: Discrete solution with XFEM. Engineering Fracture Mechanics, 2018, 191, 225-256.	2.0	58
96	Error-controlled adaptive extended finite element method for 3D linear elastic crack propagation. Computer Methods in Applied Mechanics and Engineering, 2017, 318, 319-348.	3.4	57
97	Linear buckling analysis of cracked plates by SFEM and XFEM. Journal of Mechanics of Materials and Structures, 2011, 6, 1213-1238.	0.4	56
98	Free vibration and mechanical buckling of plates with in-plane material inhomogeneity â€" A three dimensional consistent approach. Composite Structures, 2014, 118, 634-642.	3.1	56
99	Simulation of hyperelastic materials in real-time using deep learning. Medical Image Analysis, 2020, 59, 101569.	7.0	56
100	Automatised selection of load paths to construct reduced-order models in computational damage micromechanics: from dissipation-driven random selection to Bayesian optimization. Computational Mechanics, 2016, 58, 213-234.	2.2	55
101	Constraint-Based Haptic Rendering of Multirate Compliant Mechanisms. IEEE Transactions on Haptics, 2011, 4, 175-187.	1.8	54
102	Representation of singular fields without asymptotic enrichment in the extended finite element method. International Journal for Numerical Methods in Engineering, 2013, 96, 813-841.	1.5	54
103	Multiple crack detection in 3D using a stable XFEM and global optimization. Computational Mechanics, 2018, 62, 835-852.	2.2	54
104	An alternative alpha finite element method (A<mml:math) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 232 Td (xmlns:mml="http://www.w3.org using triangular meshes. Journal of Computational and Applied Mathematics, 2010, 233, 2112-2135.	1.1	53
105	Accelerating Monte Carlo estimation with derivatives of high-level finite element models. Computer Methods in Applied Mechanics and Engineering, 2017, 318, 917-936.	3.4	53
106	Modeling crack propagation in variable stiffness composite laminates using the phase field method. Composite Structures, 2019, 209, 424-433.	3.1	53
107	Impact of Soft Tissue Heterogeneity on Augmented Reality for Liver Surgery. IEEE Transactions on Visualization and Computer Graphics, 2015, 21, 584-597.	2.9	52
108	Real-Time Error Control for Surgical Simulation. IEEE Transactions on Biomedical Engineering, 2018, 65, 596-607.	2.5	52

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109	Analysis of Functionally Graded Material Plates Using Triangular Elements with Cell-Based Smoothed Discrete Shear Gap Method. Mathematical Problems in Engineering, 2014, 2014, 1-13.	0.6	51
110	Explicit finite deformation analysis of isogeometric membranes. Computer Methods in Applied Mechanics and Engineering, 2014, 277, 104-130.	3.4	51
111	Dynamic fracture simulations using the scaled boundary finite element method on hybrid polygonâ€"quadtree meshes. International Journal of Impact Engineering, 2016, 90, 154-164.	2.4	51
112	XFEM modeling of multistage hydraulic fracturing in anisotropic shale formations. Journal of Petroleum Science and Engineering, 2018, 162, 801-812.	2.1	51
113	Effects of elastic strain energy and interfacial stress on the equilibrium morphology of misfit particles in heterogeneous solids. Journal of the Mechanics and Physics of Solids, 2013, 61, 1433-1445.	2.3	50
114	Skew-symmetric Nitscheâ€™s formulation in isogeometric analysis: Dirichlet and symmetry conditions, patch coupling and frictionless contact. Computer Methods in Applied Mechanics and Engineering, 2018, 341, 188-220.	3.4	49
115	Linear smoothed extended finite element method for fatigue crack growth simulations. Engineering Fracture Mechanics, 2019, 206, 551-564.	2.0	49
116	A FEniCS implementation of the phase field method for quasi-static brittle fracture. Frontiers of Structural and Civil Engineering, 2019, 13, 380-396.	1.2	47
117	Multi-frequency acoustic topology optimization of sound-absorption materials with isogeometric boundary element methods accelerated by frequency-decoupling and model order reduction techniques. Computer Methods in Applied Mechanics and Engineering, 2022, 395, 114997.	3.4	47
118	A simulation-based design paradigm for complex cast components. Engineering With Computers, 2007, 23, 25-37.	3.5	46
119	Optimization of elastic properties and weaving patterns of woven composites. Composite Structures, 2013, 100, 575-591.	3.1	46
120	Smoothed finite element and genetic algorithm based optimization for shape adaptive composite marine propellers. Composite Structures, 2014, 109, 189-197.	3.1	45
121	On a family of convected particle domain interpolations in the material point method. Finite Elements in Analysis and Design, 2017, 126, 50-64.	1.7	45
122	Efficient Nonlinear FEM for Soft Tissue Modelling and Its GPU Implementation within the Open Source Framework SOFA. Lecture Notes in Computer Science, 2008, , 28-39.	1.0	45
123	On the Convergence of Stresses in Fretting Fatigue. Materials, 2016, 9, 639.	1.3	44
124	h- and p-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
125	Seamless integration of computer-aided geometric modeling and acoustic simulation: Isogeometric boundary element methods based on Catmull-Clark subdivision surfaces. Advances in Engineering Software, 2020, 149, 102879.	1.8	43
126	On the use of NURBS-based discretizations in the scaled boundary finite element method for wave propagation problems. Computer Methods in Applied Mechanics and Engineering, 2017, 315, 867-880.	3.4	42

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127	Adaptive Isogeometric analysis for plate vibrations: An efficient approach of local refinement based on hierarchical a posteriori error estimation. Computer Methods in Applied Mechanics and Engineering, 2018, 342, 251-286.	3.4	42
128	Multiscale modeling of material failure: Theory and computational methods. Advances in Applied Mechanics, 2019, 52, 1-103.	1.4	41
129	Mesh adaptivity driven by goal-oriented locally equilibrated superconvergent patch recovery. Computational Mechanics, 2014, 53, 957-976.	2.2	40
130	Simple and extensible plate and shell finite element models through automatic code generation tools. Computers and Structures, 2018, 209, 163-181.	2.4	40
131	Quantifying discretization errors for soft tissue simulation in computer assisted surgery: A preliminary study. Applied Mathematical Modelling, 2020, 77, 709-723.	2.2	40
132	An XFEM/CZM based inverse method for identification of composite failure parameters. Computers and Structures, 2015, 153, 91-97.	2.4	38
133	Environmental effects on the free vibration of curvilinear fibre composite laminates with cutouts. Composites Part B: Engineering, 2016, 88, 131-138.	5.9	38
134	Uncertainty quantification of dry woven fabrics: A sensitivity analysis on material properties. Composite Structures, 2014, 116, 1-17.	3.1	36
135	Crack propagation modelling in functionally graded materials using scaled boundary polygons. International Journal of Fracture, 2015, 192, 87-105.	1.1	36
136	A combined scheme of edge-based and node-based smoothed finite element methods for Reissnerâ€"Mindlin flat shells. Engineering With Computers, 2016, 32, 267-284.	3.5	36
137	A sample-efficient deep learning method for multivariate uncertainty qualification of acousticâ€"vibration interaction problems. Computer Methods in Applied Mechanics and Engineering, 2022, 393, 114784.	3.4	36
138	DEFECT ENGINEERING OF 2D MONATOMIC-LAYER MATERIALS. Modern Physics Letters B, 2013, 27, 1330017.	1.0	35
139	Virtual cutting of deformable objects based on efficient topological operations. Visual Computer, 2015, 31, 831-841.	2.5	35
140	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
141	Bi-material topology optimization for fully coupled structural-acoustic systems with isogeometric FEMâ€"BEM. Engineering Analysis With Boundary Elements, 2022, 135, 182-195.	2.0	35
142	Variable stiffness laminated composite shells â€" Free vibration characteristics based on higher-order structural theory. Composite Structures, 2018, 188, 407-414.	3.1	34
143	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
144	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

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145	Probabilistic deep learning for real-time large deformation simulations. Computer Methods in Applied Mechanics and Engineering, 2022, 398, 115307.	3.4	33
146	Gradient plasticity crack tip characterization by means of the extended finite element method. Computational Mechanics, 2017, 59, 831-842.	2.2	32
147	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
148	Model I cohesive zone models of different rank coals. International Journal of Rock Mechanics and Minings Sciences, 2019, 115, 145-156.	2.6	32
149	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
150	Interactive Simulation of Flexible Needle Insertions Based on Constraint Models. Lecture Notes in Computer Science, 2009, 12, 291-299.	1.0	32
151	Addressing volumetric locking and instabilities by selective integration in smoothed finite elements. Communications in Numerical Methods in Engineering, 2009, 25, 19-34.	1.3	31
152	A cell â€" 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
153	Open-cell aluminium foams with graded coatings as passively controllable energy absorbers. Materials and Design, 2015, 87, 36-41.	3.3	31
154	Strain smoothing for compressible and nearly-incompressible finite elasticity. Computers and Structures, 2017, 182, 540-555.	2.4	31
155	A Bayesian multiscale CNN framework to predict local stress fields in structures with microscale features. Computational Mechanics, 2022, 69, 733-766.	2.2	31
156	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
157	Locally equilibrated stress recovery for goal oriented error estimation in the extended finite element method. Computers and Structures, 2015, 152, 1-10.	2.4	30
158	A scaled boundary finite element formulation over arbitrary faceted star convex polyhedra. Engineering Analysis With Boundary Elements, 2017, 80, 218-229.	2.0	30
159	An extended finite element method (XFEM) for linear elastic fracture with smooth nodal stress. Computers and Structures, 2017, 179, 48-63.	2.4	30
160	Adaptive phase field modelling of crack propagation in orthotropic functionally graded materials. Defence Technology, 2021, 17, 185-195.	2.1	30
161	Architecture tradeoffs of integrating a mesh generator to partition of unity enriched object-oriented finite element software. European Journal of Computational Mechanics, 2007, 16, 237-258.	0.6	29
162	Isogeometric analysis suitable trivariate NURBS representation of composite panels with a new offset algorithm. CAD Computer Aided Design, 2014, 55, 49-63.	1.4	29

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163	Preoperative trajectory planning for percutaneous procedures in deformable environments. Computerized Medical Imaging and Graphics, 2016, 47, 16-28.	3.5	29
164	Controlling the error on target motion through realâ€time mesh adaptation: Applications to deep brain stimulation. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e2958.	1.0	29
165	A parallel and efficient multi-split XFEM for 3-D analysis of heterogeneous materials. Computer Methods in Applied Mechanics and Engineering, 2019, 347, 365-401.	3.4	29
166	A cell-based smoothed finite element method for three dimensional solid structures. KSCE Journal of Civil Engineering, 2012, 16, 1230-1242.	0.9	28
167	The virtual node polygonal element method for nonlinear thermal analysis with application to hybrid laser welding. International Journal of Heat and Mass Transfer, 2013, 67, 1247-1254.	2.5	28
168	Numerical evaluation of stress intensity factors and T-stress for interfacial cracks and cracks terminating at the interface without asymptotic enrichment. Computer Methods in Applied Mechanics and Engineering, 2014, 279, 86-112.	3.4	28
169	Crack growth calculations in solder joints based on microstructural phenomena with X-FEM. Computational Materials Science, 2011, 50, 1145-1156.	1.4	27
170	Quasicontinuum-based multiscale approaches for plate-like beam lattices experiencing in-plane and out-of-plane deformation. Computer Methods in Applied Mechanics and Engineering, 2014, 279, 348-378.	3.4	27
171	Scaled boundary polygons for linear elastodynamics. Computer Methods in Applied Mechanics and Engineering, 2018, 333, 238-256.	3.4	27
172	An open-source FEniCS-based framework for hyperelastic parameter estimation from noisy full-field data: Application to heterogeneous soft tissues. Computers and Structures, 2021, 255, 106620.	2.4	27
173	On the role of enrichment and statical admissibility of recovered fields in a posteriori error estimation for enriched finite element methods. Engineering Computations, 2012, 29, 814-841.	0.7	26
174	Linear smoothed extended finite element method. International Journal for Numerical Methods in Engineering, 2017, 112, 1733-1749.	1.5	26
175	A linear smoothed quadratic finite element for the analysis of laminated composite Reissnerâ€"Mindlin plates. Composite Structures, 2017, 180, 395-411.	3.1	26
176	A unified polygonal locking-free thin/thick smoothed plate element. Composite Structures, 2019, 219, 147-157.	3.1	26
177	An nth high order perturbation-based stochastic isogeometric method and implementation for quantifying geometric uncertainty in shell structures. Advances in Engineering Software, 2020, 148, 102866.	1.8	26
178	A hybrid smoothed extended finite element/level set method for modeling equilibrium shapes of nano-inhomogeneities. Computational Mechanics, 2013, 52, 1417-1428.	2.2	25
179	Mechanical buckling of curvilinear fibre composite laminate with material discontinuities and environmental effects. Composite Structures, 2015, 131, 790-798.	3.1	25
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