Ted Belytschko

List of Publications by Year in descending order

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247 papers	32,696 citations	5248 83 h-index	3997 176 g-index
251 all docs	251 docs citations	251 times ranked	10782 citing authors

#	Article	IF	Citations
1	A finite element method for crack growth without remeshing. International Journal for Numerical Methods in Engineering, 1999, 46, 131-150.	1.5	5,036
2	Extended finite element method for cohesive crack growth. Engineering Fracture Mechanics, 2002, 69, 813-833.	2.0	1,243
3	The extended/generalized finite element method: An overview of the method and its applications. International Journal for Numerical Methods in Engineering, 2010, 84, 253-304.	1.5	1,039
4	Arbitrary branched and intersecting cracks with the extended finite element method. International Journal for Numerical Methods in Engineering, 2000, 48, 1741-1760.	1.5	792
5	Reproducing kernel particle methods for structural dynamics. International Journal for Numerical Methods in Engineering, 1995, 38, 1655-1679.	1.5	701
6	A review of extended/generalized finite element methods for material modeling. Modelling and Simulation in Materials Science and Engineering, 2009, 17, 043001.	0.8	638
7	A method for dynamic crack and shear band propagation with phantom nodes. International Journal for Numerical Methods in Engineering, 2006, 67, 868-893.	1.5	628
8	Random field finite elements. International Journal for Numerical Methods in Engineering, 1986, 23, 1831-1845.	1.5	544
9	Explicit algorithms for the nonlinear dynamics of shells. Computer Methods in Applied Mechanics and Engineering, 1984, 42, 225-251.	3.4	525
10	Hourglass control in linear and nonlinear problems. Computer Methods in Applied Mechanics and Engineering, 1984, 43, 251-276.	3.4	475
11	Dynamic crack propagation based on loss of hyperbolicity and a new discontinuous enrichment. International Journal for Numerical Methods in Engineering, 2003, 58, 1873-1905.	1.5	470
12	Nodal integration of the element-free Galerkin method. Computer Methods in Applied Mechanics and Engineering, 1996, 139, 49-74.	3.4	469
13	Moving least-square reproducing kernel methods (I) Methodology and convergence. Computer Methods in Applied Mechanics and Engineering, 1997, 143, 113-154.	3.4	464
14	An extended finite element method for modeling crack growth with frictional contact. Computer Methods in Applied Mechanics and Engineering, 2001, 190, 6825-6846.	3.4	457
15	New crack-tip elements for XFEM and applications to cohesive cracks. International Journal for Numerical Methods in Engineering, 2003, 57, 2221-2240.	1.5	455
16	A finite element with embedded localization zones. Computer Methods in Applied Mechanics and Engineering, 1988, 70, 59-89.	3.4	383
17	A unified stability analysis of meshless particle methods. International Journal for Numerical Methods in Engineering, 2000, 48, 1359-1400.	1.5	377
18	Discontinuous enrichment in finite elements with a partition of unity method. Finite Elements in Analysis and Design, 2000, 36, 235-260.	1.7	344

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19	Probabilistic finite elements for nonlinear structural dynamics. Computer Methods in Applied Mechanics and Engineering, 1986, 56, 61-81.	3.4	343
20	Numerical integration of the Galerkin weak form in meshfree methods. Computational Mechanics, 1999, 23, 219-230.	2.2	340
21	Immersed particle method for fluidâ€“structure interaction. International Journal for Numerical Methods in Engineering, 2010, 81, 48-71.	1.5	340
22	A comparative study on finite element methods for dynamic fracture. Computational Mechanics, 2008, 42, 239-250.	2.2	339
23	The role of vacancy defects and holes in the fracture of carbon nanotubes. Chemical Physics Letters, 2004, 390, 413-420.	1.2	338
24	Analysis of three-dimensional crack initiation and propagation using the extended finite element method. International Journal for Numerical Methods in Engineering, 2005, 63, 760-788.	1.5	323
25	Stress projection for membrane and shear locking in shell finite elements. Computer Methods in Applied Mechanics and Engineering, 1985, 51, 221-258.	3.4	322
26	An atomistic-based finite deformation membrane for single layer crystalline films. Journal of the Mechanics and Physics of Solids, 2002, 50, 1941-1977.	2.3	315
27	Computational Studies of the Structure, Behavior upon Heating, and Mechanical Properties of Graphite Oxide. Journal of Physical Chemistry C, 2007, 111, 18099-18111.	1.5	303
28	Coupled quantum mechanical/molecular mechanical modeling of the fracture of defective carbon nanotubes and graphene sheets. Physical Review B, 2007, 75, .	1.1	293
29	Localization limiters in transient problems. International Journal of Solids and Structures, 1988, 24, 581-597.	1.3	292
30	Contact-impact by the pinball algorithm with penalty and Lagrangian methods. International Journal for Numerical Methods in Engineering, 1991, 31, 547-572.	1.5	286
31	On the construction of blending elements for local partition of unity enriched finite elements. International Journal for Numerical Methods in Engineering, 2003, 57, 1015-1038.	1.5	282
32	The extended finite element method (XFEM) for solidification problems. International Journal for Numerical Methods in Engineering, 2002, 53, 1959-1977.	1.5	252
33	Structured extended finite element methods for solids defined by implicit surfaces. International Journal for Numerical Methods in Engineering, 2003, 56, 609-635.	1.5	246
34	A stabilization procedure for the quadrilateral plate element with one-point quadrature. International Journal for Numerical Methods in Engineering, 1983, 19, 405-419.	1.5	245
35	Mechanics of defects in carbon nanotubes: Atomistic and multiscale simulations. Physical Review B, 2005, 71, .	1.1	238
36	Shear and membrane locking in curved C0 elements. Computer Methods in Applied Mechanics and Engineering, 1983, 41, 279-296.	3.4	232

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37	Analysis of thin shells by the Element-Free Galerkin method. International Journal of Solids and Structures, 1996, 33, 3057-3080.	1.3	231
38	Modeling fracture in Mindlinâ€“Reissner plates with the extended finite element method. International Journal of Solids and Structures, 2000, 37, 7161-7183.	1.3	229
39	Efficient implementation of quadrilaterals with high coarse-mesh accuracy. Computer Methods in Applied Mechanics and Engineering, 1986, 54, 279-301.	3.4	228
40	Smoothing and accelerated computations in the element free Galerkin method. Journal of Computational and Applied Mathematics, 1996, 74, 111-126.	1.1	228
41	The Element Free Galerkin method for dynamic propagation of arbitrary 3-D cracks. International Journal for Numerical Methods in Engineering, 1999, 44, 767-800.	1.5	227
42	A model for studies of mechanical interactions between the human spine and rib cage. Journal of Biomechanics, 1974, 7, 497-507.	0.9	225
43	Assumed strain stabilization of the eight node hexahedral element. Computer Methods in Applied Mechanics and Engineering, 1993, 105, 225-260.	3.4	222
44	Coupling Methods for Continuum Model with Molecular Model. International Journal for Multiscale Computational Engineering, 2003, 1, 12.	0.8	218
45	Dispersion analysis of finite element semidiscretizations of the two-dimensional wave equation. International Journal for Numerical Methods in Engineering, 1982, 18, 11-29.	1.5	210
46	Multiscale aggregating discontinuities: A method for circumventing loss of material stability. International Journal for Numerical Methods in Engineering, 2008, 73, 869-894.	1.5	199
47	Stability of explicit-implicit mesh partitions in time integration. International Journal for Numerical Methods in Engineering, 1978, 12, 1575-1586.	1.5	180
48	Techniques of Finite Elements. Journal of Applied Mechanics, Transactions ASME, 1980, 47, 978-978.	1.1	179
49	Mechanics of fracture in single point incremental forming. Journal of Materials Processing Technology, 2012, 212, 1573-1590.	3.1	173
50	Fast integration and weight function blending in the extended finite element method. International Journal for Numerical Methods in Engineering, 2009, 77, 1-29.	1.5	171
51	Abaqus implementation of extended finite element method using a level set representation for three-dimensional fatigue crack growth and life predictions. Engineering Fracture Mechanics, 2010, 77, 2840-2863.	2.0	168
52	The intrinsic XFEM: a method for arbitrary discontinuities without additional unknowns. International Journal for Numerical Methods in Engineering, 2006, 68, 1358-1385.	1.5	159
53	Superconvergent patch recovery with equilibrium and conjoint interpolant enhancements. International Journal for Numerical Methods in Engineering, 1994, 37, 517-536.	1.5	156
54	Assumed strain stabilization procedure for the 9-node Lagrange shell element. International Journal for Numerical Methods in Engineering, 1989, 28, 385-414.	1.5	152

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55	A multiscale projection method for macro/microcrack simulations. International Journal for Numerical Methods in Engineering, 2007, 71, 1466-1482.	1.5	151
56	An arbitrary lagrangian-eulerian finite element method for path-dependent materials. Computer Methods in Applied Mechanics and Engineering, 1986, 58, 227-245.	3.4	150
57	Physical stabilization of the 4-node shell element with one point quadrature. Computer Methods in Applied Mechanics and Engineering, 1994, 113, 321-350.	3.4	149
58	Mesh-free Galerkin simulations of dynamic shear band propagation and failure mode transition. International Journal of Solids and Structures, 2002, 39, 1213-1240.	1.3	149
59	Non-linear analysis of shells with arbitrary evolving cracks using XFEM. International Journal for Numerical Methods in Engineering, 2005, 62, 384-415.	1.5	149
60	Regularization of material instabilities by meshfree approximations with intrinsic length scales. International Journal for Numerical Methods in Engineering, 2000, 47, 1303-1322.	1.5	143
61	Simulations of instability in dynamic fracture by the cracking particles method. Engineering Fracture Mechanics, 2009, 76, 730-741.	2.0	143
62	Applications of higher order corotational stretch theories to nonlinear finite element analysis. Computers and Structures, 1979, 10, 175-182.	2.4	135
63	Volumetric locking in the element free Galerkin method. International Journal for Numerical Methods in Engineering, 1999, 46, 925-942.	1.5	132
64	Element-free Galerkin method: Convergence of the continuous and discontinuous shape functions. Computer Methods in Applied Mechanics and Engineering, 1997, 148, 257-277.	3.4	124
65	Finite element methods in probabilistic mechanics. Probabilistic Engineering Mechanics, 1987, 2, 201-213.	1.3	123
66	Advances in one-point quadrature shell elements. Computer Methods in Applied Mechanics and Engineering, 1992, 96, 93-107.	3.4	119
67	Blending in the extended finite element method by discontinuous Galerkin and assumed strain methods. International Journal for Numerical Methods in Engineering, 2008, 74, 1645-1669.	1.5	118
68	Cracking node method for dynamic fracture with finite elements. International Journal for Numerical Methods in Engineering, 2009, 77, 360-385.	1.5	118
69	Coarseâ€graining of multiscale crack propagation. International Journal for Numerical Methods in Engineering, 2010, 81, 537-563.	1.5	117
70	Explicit Reproducing Kernel Particle Methods for large deformation problems. International Journal for Numerical Methods in Engineering, 1998, 41, 137-166.	1.5	116
71	Analysis of fracture in thin shells by overlapping paired elements. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 5343-5360.	3.4	113
72	Bond-breaking bifurcation states in carbon nanotube fracture. Journal of Chemical Physics, 2003, 118, 9485-9488.	1.2	110

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73	A multiple-quadrature eight-node hexahedral finite element for large deformation elastoplastic analysis. Computer Methods in Applied Mechanics and Engineering, 1998, 154, 69-132.	3.4	105
74	An enriched finite element method and level sets for axisymmetric two-phase flow with surface tension. International Journal for Numerical Methods in Engineering, 2003, 58, 2041-2064.	1.5	101
75	Fluid-structure interaction. Computers and Structures, 1980, 12, 459-469.	2.4	98
76	A survey of numerical methods and computer programs for dynamic structural analysis. Nuclear Engineering and Design, 1976, 37, 23-34.	0.8	93
77	A method for growing multiple cracks without remeshing and its application to fatigue crack growth. Modelling and Simulation in Materials Science and Engineering, 2004, 12, 901-915.	0.8	92
78	On XFEM applications to dislocations and interfaces. International Journal of Plasticity, 2007, 23, 1721-1738.	4.1	92
79	Finite element methods with user-controlled meshes for fluid-structure interaction. Computer Methods in Applied Mechanics and Engineering, 1982, 33, 669-688.	3.4	88
80	A three-dimensional impact-penetration algorithm with erosion. Computers and Structures, 1987, 25, 95-104.	2.4	87
81	Arbitrary discontinuities in space-time finite elements by level sets and X-FEM. International Journal for Numerical Methods in Engineering, 2004, 61, 2595-2614.	1.5	87
82	Transient probabilistic systems. Computer Methods in Applied Mechanics and Engineering, 1988, 67, 27-54.	3.4	86
83	Finite element derivative recovery by moving least square interpolants. Computer Methods in Applied Mechanics and Engineering, 1994, 117, 211-223.	3.4	85
84	Concurrently coupled atomistic and XFEM models for dislocations and cracks. International Journal for Numerical Methods in Engineering, 2009, 78, 354-378.	1.5	84
85	A coupled quantum/continuum mechanics study of graphene fracture. International Journal of Fracture, 2012, 173, 163-173.	1.1	84
86	An implicit gradient model by a reproducing kernel strain regularization in strain localization problems. Computer Methods in Applied Mechanics and Engineering, 2004, 193, 2827-2844.	3.4	83
87	Strain-softening materials and finite-element solutions. Computers and Structures, 1986, 23, 163-180.	2.4	82
88	Secondâ€order accurate derivatives and integration schemes for meshfree methods. International Journal for Numerical Methods in Engineering, 2012, 92, 399-424.	1.5	82
89	Continuum-discontinuum modelling of shear bands. International Journal for Numerical Methods in Engineering, 2005, 62, 1857-1872.	1.5	81
90	Stability of multi-time step partitioned integrators for first-order finite element systems. Computer Methods in Applied Mechanics and Engineering, 1985, 49, 281-297.	3.4	79

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91	A comment on the article â€œA finite element method for simulation of strong and weak discontinuities in solid mechanicsâ€•by A. Hansbo and P. Hansbo [Comput. Methods Appl. Mech. Engrg. 193 (2004) 3523â€“3540]. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 1275-1276.	3.4	78
92	Continuum Mechanics Modeling and Simulation of Carbon Nanotubes. Meccanica, 2005, 40, 455-469.	1.2	77
93	Mechanics of nanocrack: Fracture, dislocation emission, and amorphization. Journal of the Mechanics and Physics of Solids, 2009, 57, 840-850.	2.3	76
94	A new fast finite element method for dislocations based on interior discontinuities. International Journal for Numerical Methods in Engineering, 2007, 69, 423-441.	1.5	74
95	Transition states and minimum energy pathways for the collapse of carbon nanotubes. Physical Review B, 2006, 73, .	1.1	73
96	A finite element method for crack growth without remeshing. , 1999, 46, 131.		73
97	Multiple scale meshfree methods for damage fracture and localization. Computational Materials Science, 1999, 16, 197-205.	1.4	72
98	Elementâ€free Galerkin method for contact problems in metal forming analysis. Engineering Computations, 2001, 18, 62-78.	0.7	72
99	A bridging domain and strain computation method for coupled atomisticâ€“continuum modelling of solids. International Journal for Numerical Methods in Engineering, 2007, 70, 913-933.	1.5	71
100	Dynamic Fracture of Shells Subjected to Impulsive Loads. Journal of Applied Mechanics, Transactions ASME, 2009, 76, .	1.1	70
101	Efficient linear and nonlinear heat conduction with a quadrilateral element. International Journal for Numerical Methods in Engineering, 1984, 20, 931-948.	1.5	69
102	A consistent control of spurious singular modes in the 9-node Lagrange element for the laplace and mindlin plate equations. Computer Methods in Applied Mechanics and Engineering, 1984, 44, 269-295.	3.4	67
103	A flat triangular shell element with improved membrane interpolation. Communications in Applied Numerical Methods, 1985, 1, 161-168.	0.5	66
104	Implementation and application of a 9-node Lagrange shell element with spurious mode control. Computers and Structures, 1985, 20, 121-128.	2.4	65
105	Multiple quadrature underintegrated finite elements. International Journal for Numerical Methods in Engineering, 1994, 37, 3263-3289.	1.5	65
106	Combined extended and superimposed finite element method for cracks. International Journal for Numerical Methods in Engineering, 2004, 59, 1119-1136.	1.5	65
107	Immersed electrokinetic finite element method. International Journal for Numerical Methods in Engineering, 2007, 71, 379-405.	1.5	65
108	Crack shielding and amplification due to multiple microcracks interacting with a macrocrack. International Journal of Fracture, 2007, 145, 1-8.	1.1	65

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109	A three-dimensional impact-penetration algorithm with erosion. International Journal of Impact Engineering, 1987, 5, 111-127.	2.4	63
110	Explicit-explicit subcycling with non-integer time step ratios for structural dynamic systems. Computers and Structures, 1989, 31, 871-880.	2.4	60
111	Elementâ€local level set method for threeâ€dimensional dynamic crack growth. International Journal for Numerical Methods in Engineering, 2009, 80, 1520-1543.	1.5	60
112	A constitutive equation for graphene based on density functional theory. International Journal of Solids and Structures, 2012, 49, 2582-2589.	1.3	60
113	A finite-strain quadrilateral shell element based on discrete Kirchhoff-Love constraints. International Journal for Numerical Methods in Engineering, 2005, 64, 1166-1206.	1.5	58
114	Dynamic fracture with meshfree enriched XFEM. Acta Mechanica, 2010, 213, 53-69.	1.1	58
115	Time dependent crack tip enrichment for dynamic crack propagation. International Journal of Fracture, 2010, 162, 33-49.	1.1	58
116	High resolution two-dimensional shear band computations: imperfections and mesh dependence. Computer Methods in Applied Mechanics and Engineering, 1994, 119, 1-15.	3.4	57
117	A finite deformation membrane based on inter-atomic potentials for the transverse mechanics of nanotubes. Mechanics of Materials, 2003, 35, 193-215.	1.7	57
118	Two-scale shear band evolution by local partition of unity. International Journal for Numerical Methods in Engineering, 2006, 66, 878-910.	1.5	57
119	Fatigue crack growth reliability by probabilistic finite elements. Computer Methods in Applied Mechanics and Engineering, 1991, 86, 297-320.	3.4	55
120	Atomistic and multiscale analyses of brittle fracture in crystal lattices. Physical Review B, 2007, 76, .	1.1	55
121	Multi-scale methods. International Journal for Numerical Methods in Engineering, 2000, 47, 1343-1361.	1.5	54
122	The Extended Finite Element Method for Dynamic Fractures. Shock and Vibration, 2005, 12, 9-23.	0.3	54
123	On a new extended finite element method for dislocations: Core enrichment and nonlinear formulationâ˜†. Journal of the Mechanics and Physics of Solids, 2008, 56, 200-214.	2.3	54
124	A meshfree contact-detection algorithm. Computer Methods in Applied Mechanics and Engineering, 2001, 190, 3271-3292.	3.4	53
125	An adaptive concurrent multiscale method for the dynamic simulation of dislocations. International Journal for Numerical Methods in Engineering, 2011, 86, 575-597.	1.5	53
126	Conservation properties of the bridging domain method for coupled molecular/continuum dynamics. International Journal for Numerical Methods in Engineering, 2008, 76, 278-294.	1.5	50

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127	Limitation principles for mixed finite elements based on the Hu-Washizu variational formulation. Computer Methods in Applied Mechanics and Engineering, 1987, 60, 195-216.	3.4	49
128	SINGULAR ENRICHMENT FINITE ELEMENT METHOD FOR ELASTODYNAMIC CRACK PROPAGATION. International Journal of Computational Methods, 2004, 01, 1-15.	0.8	48
129	Locking and shear scaling factors in CÂ° bending elements. Computers and Structures, 1986, 22, 39-52.	2.4	46
130	Convergence and stabilization of stressâ€point integration in meshâ€free and particle methods. International Journal for Numerical Methods in Engineering, 2008, 74, 1067-1087.	1.5	46
131	Nanoscale Fracture Mechanics. Annual Review of Physical Chemistry, 2007, 58, 185-209.	4.8	45
132	Parametric enrichment adaptivity by the extended finite element method. International Journal for Numerical Methods in Engineering, 2008, 73, 1671-1692.	1.5	44
133	Nonlinear versions of flexurally superconvergent elements. Computer Methods in Applied Mechanics and Engineering, 1988, 71, 241-258.	3.4	42
134	Adaptive ALE finite elements with particular reference to external work rate on frictional interface. Computer Methods in Applied Mechanics and Engineering, 1991, 93, 189-216.	3.4	42
135	Triangular composite finite elements. International Journal for Numerical Methods in Engineering, 2000, 47, 287-316.	1.5	42
136	Improvements in 3-node triangular shell elements. International Journal for Numerical Methods in Engineering, 1986, 23, 1643-1667.	1.5	41
137	Meshfree point collocation method with intrinsic enrichment for interface problems. Computational Mechanics, 2007, 40, 1037-1052.	2.2	41
138	The immersed/fictitious element method for fluidâ€“structure interaction: Volumetric consistency, compressibility and thin members. International Journal for Numerical Methods in Engineering, 2008, 74, 32-55.	1.5	41
139	An analysis of an unconditionally stable explicit method. Computers and Structures, 1983, 16, 691-696.	2.4	40
140	A computer method for stability analysis of caverns in jointed rock. International Journal for Numerical and Analytical Methods in Geomechanics, 1984, 8, 473-492.	1.7	40
141	Consistent elementâ€free Galerkin method. International Journal for Numerical Methods in Engineering, 2014, 99, 79-101.	1.5	40
142	A study of localization limiters for strain-softening in statics and dynamics. Computers and Structures, 1989, 33, 707-715.	2.4	39
143	Finite element analysis on the connection machine. Computer Methods in Applied Mechanics and Engineering, 1990, 81, 229-254.	3.4	39
144	Projection schemes for one-point quadrature shell elements. Computer Methods in Applied Mechanics and Engineering, 1994, 115, 277-286.	3.4	39

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145	Multiscale aggregating discontinuities method for microâ€“macro failure of composites. Composites Part B: Engineering, 2009, 40, 417-426.	5.9	39
146	A regularized phenomenological multiscale damage model. International Journal for Numerical Methods in Engineering, 2014, 99, 867-887.	1.5	39
147	Smoothed nodal forces for improved dynamic crack propagation modeling in XFEM. International Journal for Numerical Methods in Engineering, 2010, 84, 47-72.	1.5	38
148	Stabilized rapidly convergent 18-degrees-of-freedom flat shell triangular element. International Journal for Numerical Methods in Engineering, 1992, 33, 149-162.	1.5	37
149	Extrinsic meshfree approximation using asymptotic expansion for interfacial discontinuity of derivative. Journal of Computational Physics, 2007, 221, 370-394.	1.9	37
150	A new support integration scheme for the weakform in meshâ€free methods. International Journal for Numerical Methods in Engineering, 2010, 82, 699-715.	1.5	37
151	Flexural wave propagation behavior of lumped mass approximations. Computers and Structures, 1980, 12, 805-812.	2.4	36
152	Fission-fusion adaptivity in finite elements for nonlinear dynamics of shells. Computers and Structures, 1989, 33, 1307-1323.	2.4	36
153	An extended finite element method for dislocations in complex geometries: Thin films and nanotubes. Computer Methods in Applied Mechanics and Engineering, 2009, 198, 1872-1886.	3.4	35
154	Analysis of Finite Strain Anisotropic Elastoplastic Fracture in Thin Plates and Shells. Journal of Aerospace Engineering, 2006, 19, 259-270.	0.8	34
155	A local spaceâ€“time discontinuous finite element method. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 1325-1343.	3.4	34
156	Analysis and computations of oscillating crack propagation in a heated strip. International Journal of Fracture, 2011, 167, 57-70.	1.1	34
157	Gradient and dilatational stabilizations for stressâ€point integration in the elementâ€free Galerkin method. International Journal for Numerical Methods in Engineering, 2009, 77, 776-798.	1.5	33
158	XFEM modeling of ultrasonic wave propagation in polymer matrix particulate/fibrous composites. Wave Motion, 2013, 50, 389-401.	1.0	33
159	Three reliability methods for fatigue crack growth. Engineering Fracture Mechanics, 1996, 53, 733-752.	2.0	31
160	Two-scale method for shear bands: thermal effects and variable bandwidth. International Journal for Numerical Methods in Engineering, 2007, 72, 658-696.	1.5	31
161	Use of stabilization matrices in nonâ€linear analysis. Engineering Computations, 1985, 2, 47-55.	0.7	27
162	The mechanical properties of single-crystal and ultrananocrystalline diamond: A theoretical study. Chemical Physics Letters, 2005, 414, 351-358.	1.2	26

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163	A continuumâ€toâ€atomistic bridging domain method for composite lattices. International Journal for Numerical Methods in Engineering, 2010, 81, 1635-1658.	1.5	26
164	Nonlinear Transient Analysis of Shells and Solids of Revolution by Convected Elements. AIAA Journal, 1974, 12, 1031-1035.	1.5	25
165	Eigenvalues and stable time steps for the bilinear Mindlin plate element. International Journal for Numerical Methods in Engineering, 1985, 21, 1729-1745.	1.5	25
166	Moving particle finite element method with global smoothness. International Journal for Numerical Methods in Engineering, 2004, 59, 1007-1020.	1.5	25
167	The effects of extensive pitting on the mechanical properties of carbon nanotubes. Chemical Physics Letters, 2007, 446, 128-132.	1.2	25
168	A fractal patch test. International Journal for Numerical Methods in Engineering, 1988, 26, 2199-2210.	1.5	23
169	Fluidâ€“structure interaction by the discontinuousâ€Galerkin method for large deformations. International Journal for Numerical Methods in Engineering, 2009, 77, 30-49.	1.5	23
170	Adaptive atomisticâ€toâ€continuum modeling of propagating defects. International Journal for Numerical Methods in Engineering, 2012, 92, 835-856.	1.5	23
171	Multiscale coupling schemes spanning the quantum mechanical, atomistic forcefield, and continuum regimes. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 3190-3202.	3.4	22
172	A finite element method for crack growth without remeshing. , 1999, 46, 131.		22
173	ESFLIB: A library to compute the element free Galerkin shape functions. Computer Methods in Applied Mechanics and Engineering, 2001, 190, 2181-2205.	3.4	21
174	Materials integrity in microsystems: a framework for a petascale predictive-science-based multiscale modeling and simulation system. Computational Mechanics, 2008, 42, 485-510.	2.2	21
175	Fluid-structure interactions in light water reactor systems. Nuclear Engineering and Design, 1980, 60, 173-195.	0.8	20
176	The intrinsic partition of unity method. Computational Mechanics, 2007, 40, 803-814.	2.2	19
177	Bending and Shear Mode Decomposition in CÂ° Structural Elements. Journal of Structural Mechanics, 1983, 11, 153-176.	0.7	18
178	Partitioned rational Runge Kutta for parabolic systems. International Journal for Numerical Methods in Engineering, 1984, 20, 1581-1597.	1.5	18
179	Convergence of an element-partitioned subcycling algorithm for the semi-discrete heat equation. Numerical Methods for Partial Differential Equations, 1987, 3, 131-137.	2.0	18
180	On flexurally superconvergent four-node quadrilaterals. Computers and Structures, 1987, 25, 909-918.	2.4	18

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181	SIMD implementation of a non-linear transient shell program with partially structured meshes. International Journal for Numerical Methods in Engineering, 1992, 33, 997-1026.	1.5	18
182	Axisymmetric elements with high coarse-mesh accuracy. Computers and Structures, 1986, 23, 323-331.	2.4	17
183	X-FEM Toolkit for Automated Crack Onset and Growth Prediction. , 2008, , .		17
184	Transverse shear oscillations in four-node quadrilateral plate elements. Computers and Structures, 1987, 27, 393-398.	2.4	16
185	An efficient linear-precision partition of unity basis for unstructured meshless methods. Communications in Numerical Methods in Engineering, 2000, 16, 239-255.	1.3	16
186	Suppression of spurious intermediate frequency modes in under-integrated elements by combined stiffness/viscous stabilization. International Journal for Numerical Methods in Engineering, 2005, 64, 335-353.	1.5	16
187	Fast methods for determining instabilities of elasticâ€“plastic damage models through closedâ€form expressions. International Journal for Numerical Methods in Engineering, 2010, 84, 1490-1518.	1.5	16
188	Stability of multi-time step partitioned transient analysis for first-order systems of equations. Computer Methods in Applied Mechanics and Engineering, 1987, 65, 115-125.	3.4	15
189	A DKT shell element for dynamic large deformation analysis. Communications in Numerical Methods in Engineering, 2005, 21, 651-674.	1.3	15
190	Mechanical properties of ultrananocrystalline diamond prepared in a nitrogen-rich plasma: A theoretical study. Physical Review B, 2006, 74, .	1.1	15
191	Nanoscale fracture of tetrahedral amorphous carbon by molecular dynamics: Flaw size insensitivity. Physical Review B, 2008, 77, .	1.1	15
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