

# John E Dolbow

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

69

papers

8,934

citations

35

h-index

76

g-index

76

ext. papers

9,895

ext. citations

3.6

avg, IF

6.18

L-index

#	Paper	IF	Citations
69	A finite element method for crack growth without remeshing. <i>International Journal for Numerical Methods in Engineering</i> , <b>1999</b> , 46, 131-150	2.4	4108
68	Arbitrary branched and intersecting cracks with the extended finite element method. <i>International Journal for Numerical Methods in Engineering</i> , <b>2000</b> , 48, 1741-1760	2.4	679
67	An extended finite element method for modeling crack growth with frictional contact. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2001</b> , 190, 6825-6846	5.7	367
66	Numerical integration of the Galerkin weak form in meshfree methods. <i>Computational Mechanics</i> , <b>1999</b> , 23, 219-230	4	296
65	Discontinuous enrichment in finite elements with a partition of unity method. <i>Finite Elements in Analysis and Design</i> , <b>2000</b> , 36, 235-260	2.2	287
64	On the computation of mixed-mode stress intensity factors in functionally graded materials. <i>International Journal of Solids and Structures</i> , <b>2002</b> , 39, 2557-2574	3.1	204
63	Imposing Dirichlet boundary conditions with Nitsche's method and spline-based finite elements. <i>International Journal for Numerical Methods in Engineering</i> , <b>2010</b> , 83, 877-898	2.4	186
62	Modeling fracture in Mindlin-Reissner plates with the extended finite element method. <i>International Journal of Solids and Structures</i> , <b>2000</b> , 37, 7161-7183	3.1	184
61	An efficient finite element method for embedded interface problems. <i>International Journal for Numerical Methods in Engineering</i> , <b>2009</b> , 78, 229-252	2.4	166
60	Phase separation in biological membranes: integration of theory and experiment. <i>Annual Review of Biophysics</i> , <b>2010</b> , 39, 207-26	21.1	152
59	Domain integral formulation for stress intensity factor computation along curved three-dimensional interface cracks. <i>International Journal of Solids and Structures</i> , <b>1998</b> , 35, 1763-1783	3.1	133
58	On strategies for enforcing interfacial constraints and evaluating jump conditions with the extended finite element method. <i>International Journal for Numerical Methods in Engineering</i> , <b>2004</b> , 61, 2508-2535	2.4	129
57	Design of stiff, tough and stretchy hydrogel composites via nanoscale hybrid crosslinking and macroscale fiber reinforcement. <i>Soft Matter</i> , <b>2014</b> , 10, 7519-27	3.6	126
56	A hybrid extended finite element/level set method for modeling phase transformations. <i>International Journal for Numerical Methods in Engineering</i> , <b>2002</b> , 54, 1209-1233	2.4	120
55	Volumetric locking in the element free Galerkin method. <i>International Journal for Numerical Methods in Engineering</i> , <b>1999</b> , 46, 925-942	2.4	117
54	Chemically induced swelling of hydrogels. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2004</b> , 52, 51-84	5	114
53	A robust Nitsche's formulation for interface problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2012</b> , 225-228, 44-54	5.7	113

52	Effect of out-of-plane properties of a polyimide film on the stress fields in microelectronic structures. <i>Mechanics of Materials</i> , <b>1996</b> , 23, 311-321	3.3	98
51	Solving thermal and phase change problems with the eXtended finite element method. <i>Computational Mechanics</i> , <b>2002</b> , 28, 339-350	4	97
50	Extended finite element method in computational fracture mechanics: a retrospective examination. <i>International Journal of Fracture</i> , <b>2015</b> , 196, 189-206	2.3	79
49	A phase-field formulation for dynamic cohesive fracture. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2019</b> , 348, 680-711	5.7	76
48	A bubble-stabilized finite element method for Dirichlet constraints on embedded interfaces. <i>International Journal for Numerical Methods in Engineering</i> , <b>2007</b> , 69, 772-793	2.4	75
47	A finite element method for crack growth without remeshing <b>1999</b> , 46, 131		71
46	Switchable friction of stimulus-responsive hydrogels. <i>Langmuir</i> , <b>2007</b> , 23, 250-7	4	68
45	Robust imposition of Dirichlet boundary conditions on embedded surfaces. <i>International Journal for Numerical Methods in Engineering</i> , <b>2012</b> , 90, 40-64	2.4	58
44	On methods for stabilizing constraints over enriched interfaces in elasticity. <i>International Journal for Numerical Methods in Engineering</i> , <b>2009</b> , 78, 1009-1036	2.4	56
43	A mortared finite element method for frictional contact on arbitrary interfaces. <i>Computational Mechanics</i> , <b>2006</b> , 39, 223-235	4	55
42	Enrichment of enhanced assumed strain approximations for representing strong discontinuities: addressing volumetric incompressibility and the discontinuous patch test. <i>International Journal for Numerical Methods in Engineering</i> , <b>2004</b> , 59, 47-67	2.4	55
41	A numerical strategy for investigating the kinetic response of stimulus-responsive hydrogels. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2005</b> , 194, 4447-4480	5.7	53
40	Kinetics of thermally induced swelling of hydrogels. <i>International Journal of Solids and Structures</i> , <b>2006</b> , 43, 1878-1907	3.1	51
39	A robust Nitsche's formulation for interface problems with spline-based finite elements. <i>International Journal for Numerical Methods in Engineering</i> , <b>2015</b> , 104, 676-696	2.4	44
38	A Nitsche stabilized finite element method for frictional sliding on embedded interfaces. Part I: Single interface. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2014</b> , 268, 417-436	5.7	43
37	Numerical study of the grain-size dependent Young's modulus and Poisson's ratio of bulk nanocrystalline materials. <i>International Journal of Solids and Structures</i> , <b>2012</b> , 49, 3942-3952	3.1	40
36	Analysis of an efficient finite element method for embedded interface problems. <i>Computational Mechanics</i> , <b>2010</b> , 46, 205-211	4	36
35	Residual-free bubbles for embedded Dirichlet problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2008</b> , 197, 3751-3759	5.7	36

34	An optimization-based phase-field method for continuous-discontinuous crack propagation. <i>International Journal for Numerical Methods in Engineering</i> , <b>2018</b> , 116, 1-20	2.4	26
33	Stable imposition of stiff constraints in explicit dynamics for embedded finite element methods. <i>International Journal for Numerical Methods in Engineering</i> , <b>2012</b> , 92, 206-228	2.4	26
32	On the use of effective properties for the fracture analysis of microstructured materials. <i>Engineering Fracture Mechanics</i> , <b>2002</b> , 69, 1607-1634	4.2	23
31	Ceramic nuclear fuel fracture modeling with the extended finite element method. <i>Engineering Fracture Mechanics</i> , <b>2020</b> , 223, 106713	4.2	23
30	A narrow-band gradient-augmented level set method for multiphase incompressible flow. <i>Journal of Computational Physics</i> , <b>2014</b> , 273, 12-37	4.1	20
29	A finite element method for crack growth without remeshing <b>1999</b> , 46, 131		20
28	A numerical method for a second-gradient theory of incompressible fluid flow. <i>Journal of Computational Physics</i> , <b>2007</b> , 223, 551-570	4.1	19
27	An assumed-gradient finite element method for the level set equation. <i>International Journal for Numerical Methods in Engineering</i> , <b>2005</b> , 64, 1009-1032	2.4	17
26	A phase-field model of fracture with frictionless contact and random fracture properties: Application to thin-film fracture and soil desiccation. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2020</b> , 368, 113106	5.7	15
25	Data-driven enhancement of fracture paths in random composites. <i>Mechanics Research Communications</i> , <b>2020</b> , 103, 103443	2.2	15
24	A Nitsche stabilized finite element method for frictional sliding on embedded interfaces. Part II: Intersecting interfaces. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2013</b> , 267, 318-341	5.7	14
23	Adaptive refinement of hierarchical B-spline finite elements with an efficient data transfer algorithm. <i>International Journal for Numerical Methods in Engineering</i> , <b>2015</b> , 102, 233-256	2.4	14
22	A new method for simulating rigid body motion in incompressible two-phase flow. <i>International Journal for Numerical Methods in Fluids</i> , <b>2011</b> , 67, 713-732	1.9	14
21	Microdomain evolution on giant unilamellar vesicles. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2013</b> , 12, 597-615	3.8	13
20	An extended/generalized phase-field finite element method for crack growth with global-local enrichment. <i>International Journal for Numerical Methods in Engineering</i> , <b>2020</b> , 121, 2534-2557	2.4	12
19	A theory of amorphous viscoelastic solids undergoing finite deformations with application to hydrogels. <i>International Journal of Solids and Structures</i> , <b>2007</b> , 44, 3973-3997	3.1	12
18	Influence of surface tension in the surfactant-driven fracture of closely-packed particulate monolayers. <i>Soft Matter</i> , <b>2017</b> , 13, 5832-5841	3.6	11
17	An edge-bubble stabilized finite element method for fourth-order parabolic problems. <i>Finite Elements in Analysis and Design</i> , <b>2009</b> , 45, 485-494	2.2	11

16	A modified moment-fitted integration scheme for X-FEM applications with history-dependent material data. <i>Computational Mechanics</i> , <b>2018</b> , 62, 233-252	4	10
15	Impact of the inherent separation of scales in the Navier-Stokes- $\alpha$ equations. <i>Physical Review E</i> , <b>2009</b> , 79, 045307	2-4	7
14	Arbitrary branched and intersecting cracks with the extended finite element method <b>2000</b> , 48, 1741		6
13	The Thick Level-Set model for dynamic fragmentation. <i>Engineering Fracture Mechanics</i> , <b>2017</b> , 172, 39-60	4-2	5
12	Coupling volume-of-fluid based interface reconstructions with the extended finite element method. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2008</b> , 197, 439-447	5-7	5
11	Remeshing strategies for large deformation problems with frictional contact and nearly incompressible materials. <i>International Journal for Numerical Methods in Engineering</i> , <b>2017</b> , 109, 1289-1314	3-4	3
10	Toward robust and accurate contact solvers for large deformation applications: a remapping/adaptivity framework for mortar-based methods. <i>Computational Mechanics</i> , <b>2014</b> , 54, 53-70	4	3
9	Modeling dendritic solidification with the extended finite element method <b>2001</b> , 1135-1138		3
8	A variational phase-field model For ductile fracture with coalescence dissipation. <i>Computational Mechanics</i> , <b>2021</b> , 68, 311-335	4	3
7	Attaining regularization length insensitivity in phase-field models of ductile failure. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2021</b> , 384, 113936	5-7	3
6	A fully coupled mixed finite element method for surfactants spreading on thin liquid films. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2019</b> , 345, 429-453	5-7	2
5	Computational modeling of surface phenomena in soft-wet materials. <i>International Journal of Solids and Structures</i> , <b>2009</b> , 46, 1334-1344	3-1	1
4	The Navier-Stokes equations as a platform for a spectral multigrid method to solve the Navier-Stokes equations. <i>Computers and Fluids</i> , <b>2011</b> , 44, 102-110	2-8	1
3	Point Defects in Nematic Gels: The Case for Hedgehogs. <i>Archive for Rational Mechanics and Analysis</i> , <b>2005</b> , 177, 21-51	2-3	1
2	Scale-bridging with the extended/generalized finite element method for linear elastodynamics. <i>Computational Mechanics</i> , <b>2021</b> , 68, 295	4	1
1	Going to new lengths: Studying the Navier-Stokes- $\alpha$ equations using the strained spiral vortex model. <i>Discrete and Continuous Dynamical Systems - Series B</i> , <b>2014</b> , 19, 2207-2225	1-3	