

John E Dolbow

List of Publications by Year in Descending Order

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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 variational phase-field model For ductile fracture with coalescence dissipation. <i>Computational Mechanics</i> , 2021 , 68, 311-335 | 4 | 3 |
| 68 | Scale-bridging with the extended/generalized finite element method for linear elastodynamics. <i>Computational Mechanics</i> , 2021 , 68, 295 | 4 | 1 |
| 67 | Attaining regularization length insensitivity in phase-field models of ductile failure. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021 , 384, 113936 | 5.7 | 3 |
| 66 | 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> , 2020 , 368, 113106 | 5.7 | 15 |
| 65 | An extended/generalized phase-field finite element method for crack growth with global-local enrichment. <i>International Journal for Numerical Methods in Engineering</i> , 2020 , 121, 2534-2557 | 2.4 | 12 |
| 64 | Ceramic nuclear fuel fracture modeling with the extended finite element method. <i>Engineering Fracture Mechanics</i> , 2020 , 223, 106713 | 4.2 | 23 |
| 63 | Data-driven enhancement of fracture paths in random composites. <i>Mechanics Research Communications</i> , 2020 , 103, 103443 | 2.2 | 15 |
| 62 | A phase-field formulation for dynamic cohesive fracture. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019 , 348, 680-711 | 5.7 | 76 |
| 61 | A fully coupled mixed finite element method for surfactants spreading on thin liquid films. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019 , 345, 429-453 | 5.7 | 2 |
| 60 | A modified moment-fitted integration scheme for X-FEM applications with history-dependent material data. <i>Computational Mechanics</i> , 2018 , 62, 233-252 | 4 | 10 |
| 59 | An optimization-based phase-field method for continuous-discontinuous crack propagation. <i>International Journal for Numerical Methods in Engineering</i> , 2018 , 116, 1-20 | 2.4 | 26 |
| 58 | Remeshing strategies for large deformation problems with frictional contact and nearly incompressible materials. <i>International Journal for Numerical Methods in Engineering</i> , 2017 , 109, 1289-1314 | 3.4 | 3 |
| 57 | The Thick Level-Set model for dynamic fragmentation. <i>Engineering Fracture Mechanics</i> , 2017 , 172, 39-60 | 4.2 | 5 |
| 56 | Influence of surface tension in the surfactant-driven fracture of closely-packed particulate monolayers. <i>Soft Matter</i> , 2017 , 13, 5832-5841 | 3.6 | 11 |
| 55 | A robust Nitsche's formulation for interface problems with spline-based finite elements. <i>International Journal for Numerical Methods in Engineering</i> , 2015 , 104, 676-696 | 2.4 | 44 |
| 54 | Adaptive refinement of hierarchical B-spline finite elements with an efficient data transfer algorithm. <i>International Journal for Numerical Methods in Engineering</i> , 2015 , 102, 233-256 | 2.4 | 14 |
| 53 | Extended finite element method in computational fracture mechanics: a retrospective examination. <i>International Journal of Fracture</i> , 2015 , 196, 189-206 | 2.3 | 79 |

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| 52 | Design of stiff, tough and stretchy hydrogel composites via nanoscale hybrid crosslinking and macroscale fiber reinforcement. <i>Soft Matter</i> , 2014 , 10, 7519-27 | 3.6 | 126 |
| 51 | Toward robust and accurate contact solvers for large deformation applications: a remapping/adaptivity framework for mortar-based methods. <i>Computational Mechanics</i> , 2014 , 54, 53-70 | 4 | 3 |
| 50 | 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> , 2014 , 268, 417-436 | 5.7 | 43 |
| 49 | A narrow-band gradient-augmented level set method for multiphase incompressible flow. <i>Journal of Computational Physics</i> , 2014 , 273, 12-37 | 4.1 | 20 |
| 48 | Going to new lengths: Studying the Navier–Stokes– β equations using the strained spiral vortex model. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2014 , 19, 2207-2225 | 1.3 | |
| 47 | 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> , 2013 , 267, 318-341 | 5.7 | 14 |
| 46 | Microdomain evolution on giant unilamellar vesicles. <i>Biomechanics and Modeling in Mechanobiology</i> , 2013 , 12, 597-615 | 3.8 | 13 |
| 45 | Robust imposition of Dirichlet boundary conditions on embedded surfaces. <i>International Journal for Numerical Methods in Engineering</i> , 2012 , 90, 40-64 | 2.4 | 58 |
| 44 | 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> , 2012 , 49, 3942-3952 | 3.1 | 40 |
| 43 | Stable imposition of stiff constraints in explicit dynamics for embedded finite element methods. <i>International Journal for Numerical Methods in Engineering</i> , 2012 , 92, 206-228 | 2.4 | 26 |
| 42 | A robust Nitsche's formulation for interface problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2012 , 225-228, 44-54 | 5.7 | 113 |
| 41 | A new method for simulating rigid body motion in incompressible two-phase flow. <i>International Journal for Numerical Methods in Fluids</i> , 2011 , 67, 713-732 | 1.9 | 14 |
| 40 | The Navier–Stokes– β equations as a platform for a spectral multigrid method to solve the Navier–Stokes equations. <i>Computers and Fluids</i> , 2011 , 44, 102-110 | 2.8 | 1 |
| 39 | Phase separation in biological membranes: integration of theory and experiment. <i>Annual Review of Biophysics</i> , 2010 , 39, 207-26 | 21.1 | 152 |
| 38 | Analysis of an efficient finite element method for embedded interface problems. <i>Computational Mechanics</i> , 2010 , 46, 205-211 | 4 | 36 |
| 37 | Imposing Dirichlet boundary conditions with Nitsche's method and spline-based finite elements. <i>International Journal for Numerical Methods in Engineering</i> , 2010 , 83, 877-898 | 2.4 | 186 |
| 36 | Impact of the inherent separation of scales in the Navier-Stokes- β equations. <i>Physical Review E</i> , 2009 , 79, 045307 | 2.4 | 7 |
| 35 | An efficient finite element method for embedded interface problems. <i>International Journal for Numerical Methods in Engineering</i> , 2009 , 78, 229-252 | 2.4 | 166 |

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| 34 | On methods for stabilizing constraints over enriched interfaces in elasticity. <i>International Journal for Numerical Methods in Engineering</i> , 2009 , 78, 1009-1036 | 2.4 | 56 |
| 33 | An edge-bubble stabilized finite element method for fourth-order parabolic problems. <i>Finite Elements in Analysis and Design</i> , 2009 , 45, 485-494 | 2.2 | 11 |
| 32 | Computational modeling of surface phenomena in soft-wet materials. <i>International Journal of Solids and Structures</i> , 2009 , 46, 1334-1344 | 3.1 | 1 |
| 31 | Coupling volume-of-fluid based interface reconstructions with the extended finite element method. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008 , 197, 439-447 | 5.7 | 5 |
| 30 | Residual-free bubbles for embedded Dirichlet problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008 , 197, 3751-3759 | 5.7 | 36 |
| 29 | Switchable friction of stimulus-responsive hydrogels. <i>Langmuir</i> , 2007 , 23, 250-7 | 4 | 68 |
| 28 | A bubble-stabilized finite element method for Dirichlet constraints on embedded interfaces. <i>International Journal for Numerical Methods in Engineering</i> , 2007 , 69, 772-793 | 2.4 | 75 |
| 27 | A theory of amorphous viscoelastic solids undergoing finite deformations with application to hydrogels. <i>International Journal of Solids and Structures</i> , 2007 , 44, 3973-3997 | 3.1 | 12 |
| 26 | A numerical method for a second-gradient theory of incompressible fluid flow. <i>Journal of Computational Physics</i> , 2007 , 223, 551-570 | 4.1 | 19 |
| 25 | Kinetics of thermally induced swelling of hydrogels. <i>International Journal of Solids and Structures</i> , 2006 , 43, 1878-1907 | 3.1 | 51 |
| 24 | A mortared finite element method for frictional contact on arbitrary interfaces. <i>Computational Mechanics</i> , 2006 , 39, 223-235 | 4 | 55 |
| 23 | A numerical strategy for investigating the kinetic response of stimulus-responsive hydrogels. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2005 , 194, 4447-4480 | 5.7 | 53 |
| 22 | An assumed-gradient finite element method for the level set equation. <i>International Journal for Numerical Methods in Engineering</i> , 2005 , 64, 1009-1032 | 2.4 | 17 |
| 21 | Point Defects in Nematic Gels: The Case for Hedgehogs. <i>Archive for Rational Mechanics and Analysis</i> , 2005 , 177, 21-51 | 2.3 | 1 |
| 20 | Chemically induced swelling of hydrogels. <i>Journal of the Mechanics and Physics of Solids</i> , 2004 , 52, 51-84 | 5 | 114 |
| 19 | 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> , 2004 , 61, 2508-2535 | 2.4 | 129 |
| 18 | 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> , 2004 , 59, 47-67 | 2.4 | 55 |
| 17 | A hybrid extended finite element/level set method for modeling phase transformations. <i>International Journal for Numerical Methods in Engineering</i> , 2002 , 54, 1209-1233 | 2.4 | 120 |

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|----|--|-----|------|
| 16 | Solving thermal and phase change problems with the eXtended finite element method. <i>Computational Mechanics</i> , 2002 , 28, 339-350 | 4 | 97 |
| 15 | On the computation of mixed-mode stress intensity factors in functionally graded materials. <i>International Journal of Solids and Structures</i> , 2002 , 39, 2557-2574 | 3.1 | 204 |
| 14 | On the use of effective properties for the fracture analysis of microstructured materials. <i>Engineering Fracture Mechanics</i> , 2002 , 69, 1607-1634 | 4.2 | 23 |
| 13 | An extended finite element method for modeling crack growth with frictional contact. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2001 , 190, 6825-6846 | 5.7 | 367 |
| 12 | Modeling dendritic solidification with the extended finite element method 2001 , 1135-1138 | | 3 |
| 11 | Arbitrary branched and intersecting cracks with the extended finite element method. <i>International Journal for Numerical Methods in Engineering</i> , 2000 , 48, 1741-1760 | 2.4 | 679 |
| 10 | Modeling fracture in Mindlin-Reissner plates with the extended finite element method. <i>International Journal of Solids and Structures</i> , 2000 , 37, 7161-7183 | 3.1 | 184 |
| 9 | Discontinuous enrichment in finite elements with a partition of unity method. <i>Finite Elements in Analysis and Design</i> , 2000 , 36, 235-260 | 2.2 | 287 |
| 8 | Arbitrary branched and intersecting cracks with the extended finite element method 2000 , 48, 1741 | | 6 |
| 7 | Numerical integration of the Galerkin weak form in meshfree methods. <i>Computational Mechanics</i> , 1999 , 23, 219-230 | 4 | 296 |
| 6 | A finite element method for crack growth without remeshing. <i>International Journal for Numerical Methods in Engineering</i> , 1999 , 46, 131-150 | 2.4 | 4108 |
| 5 | Volumetric locking in the element free Galerkin method. <i>International Journal for Numerical Methods in Engineering</i> , 1999 , 46, 925-942 | 2.4 | 117 |
| 4 | A finite element method for crack growth without remeshing 1999 , 46, 131 | | 20 |
| 3 | A finite element method for crack growth without remeshing 1999 , 46, 131 | | 71 |
| 2 | Domain integral formulation for stress intensity factor computation along curved three-dimensional interface cracks. <i>International Journal of Solids and Structures</i> , 1998 , 35, 1763-1783 | 3.1 | 133 |
| 1 | Effect of out-of-plane properties of a polyimide film on the stress fields in microelectronic structures. <i>Mechanics of Materials</i> , 1996 , 23, 311-321 | 3.3 | 98 |