List of Publications by Year in descending order

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DETED HANSBO

#	Article	IF	CITATIONS
1	An unfitted finite element method, based on Nitsche's method, for elliptic interface problems. Computer Methods in Applied Mechanics and Engineering, 2002, 191, 5537-5552.	6.6	677
2	A finite element method for the simulation of strong and weak discontinuities in solid mechanics. Computer Methods in Applied Mechanics and Engineering, 2004, 193, 3523-3540.	6.6	646
3	CutFEM: Discretizing geometry and partial differential equations. International Journal for Numerical Methods in Engineering, 2015, 104, 472-501.	2.8	479
4	Introduction to Adaptive Methods for Differential Equations. Acta Numerica, 1995, 4, 105-158.	10.7	411
5	Fictitious domain finite element methods using cut elements: II. A stabilized Nitsche method. Applied Numerical Mathematics, 2012, 62, 328-341.	2.1	301
6	Adaptive finite element methods in computational mechanics. Computer Methods in Applied Mechanics and Engineering, 1992, 101, 143-181.	6.6	287
7	Discontinuous Galerkin methods for incompressible and nearly incompressible elasticity by Nitsche's method. Computer Methods in Applied Mechanics and Engineering, 2002, 191, 1895-1908.	6.6	252
8	Edge stabilization for Galerkin approximations of convection–diffusion–reaction problems. Computer Methods in Applied Mechanics and Engineering, 2004, 193, 1437-1453.	6.6	247
9	Fictitious domain finite element methods using cut elements: I. A stabilized Lagrange multiplier method. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 2680-2686.	6.6	185
10	A velocity-pressure streamline diffusion finite element method for the incompressible Navier-Stokes equations. Computer Methods in Applied Mechanics and Engineering, 1990, 84, 175-192.	6.6	172
11	A finite element method for domain decomposition with non-matching grids. ESAIM: Mathematical Modelling and Numerical Analysis, 2003, 37, 209-225.	1.9	166
12	Nitsche's method for interface problems in computaâ€ŧional mechanics. GAMM Mitteilungen, 2005, 28, 183-206.	5.5	161
13	A cut finite element method for a Stokes interface problem. Applied Numerical Mathematics, 2014, 85, 90-114.	2.1	144
14	On the convergence of shock-capturing streamline diffusion finite element methods for hyperbolic conservation laws. Mathematics of Computation, 1990, 54, 107-129.	2.1	143
15	A unified stabilized method for Stokes' and Darcy's equations. Journal of Computational and Applied Mathematics, 2007, 198, 35-51.	2.0	143
16	Continuous Interior Penalty Finite Element Method for Oseen's Equations. SIAM Journal on Numerical Analysis, 2006, 44, 1248-1274.	2.3	131
17	A Nitsche extended finite element method for incompressible elasticity with discontinuous modulus of elasticity. Computer Methods in Applied Mechanics and Engineering, 2009, 198, 3352-3360.	6.6	115
18	Discontinuous Galerkin and the Crouzeix–Raviart element: Application to elasticity. ESAIM: Mathematical Modelling and Numerical Analysis, 2003, 37, 63-72.	1.9	106

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19	A finite element method on composite grids based on Nitsche's method. ESAIM: Mathematical Modelling and Numerical Analysis, 2003, 37, 495-514.	1.9	102
20	Energy norm a posteriori error estimation for discontinuous Galerkin methods. Computer Methods in Applied Mechanics and Engineering, 2003, 192, 723-733.	6.6	101
21	A Lagrange multiplier method for the finite element solution of elliptic interface problems using non-matching meshes. Numerische Mathematik, 2005, 100, 91-115.	1.9	83
22	Edge stabilization for the generalized Stokes problem: A continuous interior penalty method. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 2393-2410.	6.6	82
23	Stabilized Crouzeix-Raviart element for the Darcy-Stokes problem. Numerical Methods for Partial Differential Equations, 2005, 21, 986-997.	3.6	77
24	The characteristic streamline diffusion method for the time-dependent incompressible Navier-Stokes equations. Computer Methods in Applied Mechanics and Engineering, 1992, 99, 171-186.	6.6	71
25	On advancing front mesh generation in three dimensions. International Journal for Numerical Methods in Engineering, 1995, 38, 3551-3569.	2.8	71
26	Shape optimization using the cut finite element method. Computer Methods in Applied Mechanics and Engineering, 2018, 328, 242-261.	6.6	66
27	Strategies for computing goal-orienteda posteriori error measures in non-linear elasticity. International Journal for Numerical Methods in Engineering, 2002, 55, 879-894.	2.8	63
28	A stabilized cut finite element method for partial differential equations on surfaces: The Laplace–Beltrami operator. Computer Methods in Applied Mechanics and Engineering, 2015, 285, 188-207.	6.6	62
29	A cut finite element method for coupled bulk-surface problems on time-dependent domains. Computer Methods in Applied Mechanics and Engineering, 2016, 307, 96-116.	6.6	50
30	Nitsche's method combined with space–time finite elements for ALE fluid–structure interaction problems. Computer Methods in Applied Mechanics and Engineering, 2004, 193, 4195-4206.	6.6	48
31	Stabilized Lagrange multiplier methods for bilateral elastic contact with friction. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 4323-4333.	6.6	47
32	A cut finite element method with boundary value correction. Mathematics of Computation, 2017, 87, 633-657.	2.1	44
33	Adaptive streamline diffusion methods for compressible flow using conservation variables. Computer Methods in Applied Mechanics and Engineering, 1991, 87, 267-280.	6.6	41
34	The characteristic streamline diffusion method for convection-diffusion problems. Computer Methods in Applied Mechanics and Engineering, 1992, 96, 239-253.	6.6	40
35	Cut finite element methods for coupled bulk–surface problems. Numerische Mathematik, 2016, 133, 203-231.	1.9	39
36	A simple pressure stabilization method for the Stokes equation. Communications in Numerical Methods in Engineering, 2008, 24, 1421-1430.	1.3	36

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37	Adaptive strategies and error control for computing material forces in fracture mechanics. International Journal for Numerical Methods in Engineering, 2004, 60, 1287-1299.	2.8	34
38	Characteristic cut finite element methods for convection–diffusion problems on time dependent surfaces. Computer Methods in Applied Mechanics and Engineering, 2015, 293, 431-461.	6.6	34
39	A cut discontinuous Galerkin method for the Laplace–Beltrami operator. IMA Journal of Numerical Analysis, 2017, 37, 138-169.	2.9	34
40	Explicit Streamline Diffusion Finite Element Methods for the Compressible Euler Equations in Conservation Variables. Journal of Computational Physics, 1993, 109, 274-288.	3.8	32
41	Cut finite element methods for partial differential equations on embedded manifolds of arbitrary codimensions. ESAIM: Mathematical Modelling and Numerical Analysis, 2018, 52, 2247-2282.	1.9	32
42	A stabilized non-conforming finite element method for incompressible flow. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 2881-2899.	6.6	30
43	Solving ill-posed control problems by stabilized finite element methods: an alternative to Tikhonov regularization. Inverse Problems, 2018, 34, 035004.	2.0	26
44	A posteriori error estimates for continuous/discontinuous Galerkin approximations of the Kirchhoff–Love plate. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 3289-3295.	6.6	25
45	Tangential differential calculus and the finite element modeling of a large deformation elastic membrane problem. Computational Mechanics, 2015, 56, 87-95.	4.0	25
46	A new approach to quadrature for finite elements incorporating hourglass control as a special case. Computer Methods in Applied Mechanics and Engineering, 1998, 158, 301-309.	6.6	24
47	Finite element modeling of a linear membrane shell problem using tangential differential calculus. Computer Methods in Applied Mechanics and Engineering, 2014, 270, 1-14.	6.6	24
48	Full gradient stabilized cut finite element methods for surface partial differential equations. Computer Methods in Applied Mechanics and Engineering, 2016, 310, 278-296.	6.6	24
49	Analysis of finite element methods for vector Laplacians on surfaces. IMA Journal of Numerical Analysis, 2020, 40, 1652-1701.	2.9	24
50	A finite element method with discontinuous rotations for the Mindlin–Reissner plate model. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 638-648.	6.6	21
51	Aspects of conservation in finite element flow computations. Computer Methods in Applied Mechanics and Engineering, 1994, 117, 423-437.	6.6	20
52	Time finite elements and error computation for (visco)plasticity with hardening or softening. International Journal for Numerical Methods in Engineering, 2003, 56, 2213-2232.	2.8	20
53	Cut finite elements for convection in fractured domains. Computers and Fluids, 2019, 179, 726-734.	2.5	18
54	Variational formulation of curved beams in global coordinates. Computational Mechanics, 2014, 53, 611-623.	4.0	16

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55	Least-squares stabilized augmented Lagrangian multiplier method for elastic contact. Finite Elements in Analysis and Design, 2016, 116, 32-37.	3.2	16
56	Cut finite element modeling of linear membranes. Computer Methods in Applied Mechanics and Engineering, 2016, 310, 98-111.	6.6	16
57	A stabilized cut finite element method for the Darcy problem on surfaces. Computer Methods in Applied Mechanics and Engineering, 2017, 326, 298-318.	6.6	16
58	Galerkin least squares finite element method for the obstacle problem. Computer Methods in Applied Mechanics and Engineering, 2017, 313, 362-374.	6.6	16
59	A Crank–Nicolson Type Space–Time Finite Element Method for Computing on Moving Meshes. Journal of Computational Physics, 2000, 159, 274-289.	3.8	15
60	A note on energy conservation for Hamiltonian systems using continuous time finite elements. Communications in Numerical Methods in Engineering, 2001, 17, 863-869.	1.3	15
61	Piecewise divergence-free discontinuous Galerkin methods for Stokes flow. Communications in Numerical Methods in Engineering, 2006, 24, 355-366.	1.3	15
62	Augmented Lagrangian finite element methods for contact problems. ESAIM: Mathematical Modelling and Numerical Analysis, 2019, 53, 173-195.	1.9	15
63	Adaptive Finite Element Methods for Small Strain Elasto-Plasticity. , 1992, , 273-288.		14
64	A cut finite element method for the Bernoulli free boundary value problem. Computer Methods in Applied Mechanics and Engineering, 2017, 317, 598-618.	6.6	13
65	The Penalty-Free Nitsche Method and Nonconforming Finite Elements for the Signorini Problem. SIAM Journal on Numerical Analysis, 2017, 55, 2523-2539.	2.3	13
66	Cut topology optimization for linear elasticity with coupling to parametric nondesign domain regions. Computer Methods in Applied Mechanics and Engineering, 2019, 350, 462-479.	6.6	13
67	Hybridized CutFEM for Elliptic Interface Problems. SIAM Journal of Scientific Computing, 2019, 41, A3354-A3380.	2.8	12
68	Finite element approximation of the Laplace–Beltrami operator on a surface with boundary. Numerische Mathematik, 2019, 141, 141-172.	1.9	12
69	Cut Bogner-Fox-Schmit elements for plates. Advanced Modeling and Simulation in Engineering Sciences, 2020, 7, .	1.7	12
70	A free-Lagrange finite element method using space-time elements. Computer Methods in Applied Mechanics and Engineering, 2000, 188, 347-361.	6.6	11
71	Stabilized Finite Element Approximation of the Mean Curvature Vector on Closed Surfaces. SIAM Journal on Numerical Analysis, 2015, 53, 1806-1832.	2.3	11
72	Cut Finite Element Methods for Linear Elasticity Problems. Lecture Notes in Computational Science and Engineering, 2017, , 25-63.	0.3	11

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73	Energy norm a posteriori error estimates for discontinuous Galerkin approximations of the linear elasticity problem. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 3026-3030.	6.6	10
74	A discontinuous Galerkin method for cohesive zone modelling. Finite Elements in Analysis and Design, 2015, 102-103, 1-6.	3.2	10
75	Continuous/discontinuous finite element modelling of Kirchhoff plate structures in \$\$mathbb {R}^3\$\$ R 3 using tangential differential calculus. Computational Mechanics, 2017, 60, 693-702.	4.0	10
76	A nonconforming rotated Q1 approximation on tetrahedra. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 1311-1316.	6.6	9
77	Stabilized CutFEM for the convection problem on surfaces. Numerische Mathematik, 2019, 141, 103-139.	1.9	9
78	A simple finite element method for elliptic bulk problems with embedded surfaces. Computational Geosciences, 2019, 23, 189-199.	2.4	9
79	Locking free quadrilateral continuous/discontinuous finite element methods for the Reissner–Mindlin plate. Computer Methods in Applied Mechanics and Engineering, 2014, 269, 381-393.	6.6	8
80	Minimal surface computation using a finite element method on an embedded surface. International Journal for Numerical Methods in Engineering, 2015, 104, 502-512.	2.8	8
81	A cut finite element method for a model of pressure in fractured media. Numerische Mathematik, 2020, 146, 783-818.	1.9	8
82	A Nitsche method for elliptic problems on composite surfaces. Computer Methods in Applied Mechanics and Engineering, 2017, 326, 505-525.	6.6	7
83	Optimal design of fibre reinforced membrane structures. Structural and Multidisciplinary Optimization, 2017, 56, 781-789.	3.5	7
84	Augmented Lagrangian and Galerkin leastâ€squares methods for membrane contact. International Journal for Numerical Methods in Engineering, 2018, 114, 1179-1191.	2.8	7
85	Dirichlet boundary value correction using Lagrange multipliers. BIT Numerical Mathematics, 2020, 60, 235-260.	2.0	7
86	Adaptive finite element methods for hydrodynamic lubrication with cavitation. International Journal for Numerical Methods in Engineering, 2007, 72, 1584-1604.	2.8	6
87	A Nitsche-type method for Helmholtz equation with an embedded acoustically permeable interface. Computer Methods in Applied Mechanics and Engineering, 2016, 304, 479-500.	6.6	6
88	A stabilized cut streamline diffusion finite element method for convection–diffusion problems on surfaces. Computer Methods in Applied Mechanics and Engineering, 2020, 358, 112645.	6.6	6
89	A linear nonconforming finite element method for Maxwell's equations in two dimensions. Part I: Frequency domain. Journal of Computational Physics, 2010, 229, 6534-6547.	3.8	5
90	Application of a minimal compatible element to incompressible and nearly incompressible continuum mechanics. Computer Methods in Applied Mechanics and Engineering, 2020, 369, 113224.	6.6	5

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91	Finite element procedures for computing normals and mean curvature on triangulated surfaces and their use for mesh refinement. Computer Methods in Applied Mechanics and Engineering, 2020, 372, 113445.	6.6	5
92	Error Estimates for the Smagorinsky Turbulence Model: Enhanced Stability Through Scale Separation and Numerical Stabilization. Journal of Mathematical Fluid Mechanics, 2022, 24, 1.	1.0	5
93	Nonconforming rotated <i>Q</i> ₁ tetrahedral element with explicit time stepping for elastodynamics. International Journal for Numerical Methods in Engineering, 2012, 91, 1105-1114.	2.8	4
94	A posteriori error estimates for continuous/discontinuous Galerkin approximations of the Kirchhoff–Love buckling problem. Computational Mechanics, 2015, 56, 815-827.	4.0	4
95	Moving finite element methods by use of space-time elements: I. Scalar problems. Numerical Methods for Partial Differential Equations, 1998, 14, 251-262.	3.6	3
96	A simple approach for finite element simulation of reinforced plates. Finite Elements in Analysis and Design, 2018, 142, 51-60.	3.2	3
97	A cut finite element method for elliptic bulk problems with embedded surfaces. GEM - International Journal on Geomathematics, 2019, 10, 10.	1.6	3
98	A stable cut finite element method for partial differential equations on surfaces: The Helmholtz–Beltrami operator. Computer Methods in Applied Mechanics and Engineering, 2020, 362, 112803.	6.6	3
99	Nitsche's finite element method for model coupling in elasticity. Computer Methods in Applied Mechanics and Engineering, 2022, 392, 114707.	6.6	3
100	A stabilized finite element method for the Darcy problem on surfaces. IMA Journal of Numerical Analysis, 2016, , drw041.	2.9	2
101	A Cut Finite Element Method with Boundary Value Correction for the Incompressible Stokes Equations. Lecture Notes in Computational Science and Engineering, 2019, , 183-192.	0.3	2
102	The nonconforming linear strain tetrahedron for a large deformation elasticity problem. Computational Mechanics, 2016, 58, 929-935.	4.0	1
103	Augmented Lagrangian Method for Thin Plates with Signorini Boundaries. Lecture Notes in Computational Science and Engineering, 2021, , 509-519.	0.3	1
104	Augmented Lagrangian approach to deriving discontinuous Galerkin methods for nonlinear elasticity problems. International Journal for Numerical Methods in Engineering, 0, , .	2.8	0