

Harald van Brummelen

List of Publications by Year in descending order

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78
papers

1,867
citations

236612

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276539

41
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79
docs citations

79
times ranked

1315
citing authors

#	ARTICLE	IF	CITATIONS
1	Topology-preserving scan-based immersed isogeometric analysis. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2022, 392, 114648.	3.4	10
2	Residual-based error estimation and adaptivity for stabilized immersed isogeometric analysis using truncated hierarchical B-splines. <i>Journal of Mechanics</i> , 2022, 38, 204-237.	0.7	10
3	An adaptive isogeometric analysis approach to elasto-capillary fluid-solid interaction. <i>International Journal for Numerical Methods in Engineering</i> , 2021, 122, 5331-5352.	1.5	11
4	An efficient quasi-Newton method for three-dimensional steady free surface flow. <i>International Journal for Numerical Methods in Fluids</i> , 2021, 93, 2581-2610.	0.9	4
5	Image-based modeling of spontaneous imbibition in porous media by a dynamic pore network model. <i>Advances in Water Resources</i> , 2021, 152, 103932.	1.7	29
6	Vanguard developments in computational methods for fluid-structure interaction. <i>International Journal for Numerical Methods in Engineering</i> , 2021, 122, 5173-5175.	1.5	1
7	Nitsche's method as a variational multiscale formulation and a resulting boundary layer fine-scale model. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021, 382, 113878.	3.4	2
8	Reduced order models for finite-volume simulations of turbulent flow around wind-turbine blades. <i>Journal of Physics: Conference Series</i> , 2021, 2018, 012042.	0.3	1
9	A Proper Generalized Decomposition (PGD) approach to crack propagation in brittle materials: with application to random field material properties. <i>Computational Mechanics</i> , 2020, 65, 451-473.	2.2	15
10	Multigrid solvers for immersed finite element methods and immersed isogeometric analysis. <i>Computational Mechanics</i> , 2020, 65, 807-838.	2.2	29
11	Error-estimate-based adaptive integration for immersed isogeometric analysis. <i>Computers and Mathematics With Applications</i> , 2020, 80, 2481-2516.	1.4	26
12	An efficient quasi-Newton method for two-dimensional steady free surface flow. <i>International Journal for Numerical Methods in Fluids</i> , 2020, 92, 785-801.	0.9	6
13	Singular Nature of the Elastocapillary Ridge. <i>Physical Review X</i> , 2020, 10, .	2.8	11
14	Entropy Stable Discontinuous Galerkin Finite Element Moment Methods for Compressible Fluid Dynamics. <i>Lecture Notes in Computational Science and Engineering</i> , 2020, , 75-95.	0.1	1
15	Robust and parallel scalable iterative solutions for large-scale finite cell analyses. <i>Finite Elements in Analysis and Design</i> , 2019, 163, 14-30.	1.7	37
16	Preconditioning immersed isogeometric finite element methods with application to flow problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019, 348, 604-631.	3.4	34
17	Binary-fluid-solid interaction based on the Navier-Stokes-Korteweg equations. <i>Mathematical Models and Methods in Applied Sciences</i> , 2019, 29, 995-1036.	1.7	9
18	Fast divergence-conforming reduced basis methods for steady Navier-Stokes flow. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019, 346, 486-512.	3.4	15

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19	Sampling-based stochastic analysis of the PKN model for hydraulic fracturing. Computational Geosciences, 2019, 23, 81-105.	1.2	6
20	Skeleton-stabilized immersogeometric analysis for incompressible viscous flow problems. Computer Methods in Applied Mechanics and Engineering, 2019, 344, 421-450.	3.4	27
21	Skeleton-stabilized IsoGeometric Analysis: High-regularity interior-penalty methods for incompressible viscous flow problems. Computer Methods in Applied Mechanics and Engineering, 2018, 337, 324-351.	3.4	16
22	Diffuse-interface two-phase flow models with different densities: A new quasi-incompressible form and a linear energy-stable method. Mathematical Models and Methods in Applied Sciences, 2018, 28, 733-770.	1.7	39
23	Finite element simulation of pressure-loaded phase-field fractures. Meccanica, 2018, 53, 1513-1545.	1.2	8
24	A Posteriori Error Estimation and Adaptivity for Nonlinear Parabolic Equations using IMEX-Galerkin Discretization of Primal and Dual Equations. SIAM Journal of Scientific Computing, 2018, 40, A3371-A3399.	1.3	2
25	Worst-case multi-objective error estimation and adaptivity. Computer Methods in Applied Mechanics and Engineering, 2017, 313, 723-743.	3.4	18
26	Error estimation and adaptive moment hierarchies for goal-oriented approximations of the Boltzmann equation. Computer Methods in Applied Mechanics and Engineering, 2017, 325, 219-239.	3.4	9
27	Condition number analysis and preconditioning of the finite cell method. Computer Methods in Applied Mechanics and Engineering, 2017, 316, 297-327.	3.4	97
28	Mixed Isogeometric Finite Cell Methods for the Stokes problem. Computer Methods in Applied Mechanics and Engineering, 2017, 316, 400-423.	3.4	32
29	8. Binary-fluid–solid interaction based on the Navier–Stokes–Cahn–Hilliard Equations. , 2017, , 283-328.		8
30	A multiscale diffuse-interface model for two-phase flow in porous media. Computers and Fluids, 2016, 141, 212-222.	1.3	7
31	An entropy stable discontinuous Galerkin finite-element moment method for the Boltzmann equation. Computers and Mathematics With Applications, 2016, 72, 1988-1999.	1.4	12
32	Moment Closure Approximations of the Boltzmann Equation Based on φ -Divergences. Journal of Statistical Physics, 2016, 164, 77-104.	0.5	25
33	A fracture-controlled path-following technique for phase-field modeling of brittle fracture. Finite Elements in Analysis and Design, 2016, 113, 14-29.	1.7	71
34	The effects of plaque morphology and material properties on peak cap stress in human coronary arteries. Computer Methods in Biomechanics and Biomedical Engineering, 2016, 19, 771-779.	0.9	23
35	Elasto-Capillarity Simulations Based on the Navier–Stokes–Cahn–Hilliard Equations. Modeling and Simulation in Science, Engineering and Technology, 2016, , 451-462.	0.4	11
36	Duality-based two-level error estimation for time-dependent PDEs: Application to linear and nonlinear parabolic equations. Computer Methods in Applied Mechanics and Engineering, 2015, 288, 83-109.	3.4	14

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37	Goal-oriented model adaptivity for viscous incompressible flows. Computational Mechanics, 2015, 55, 1181-1190.	2.2	3
38	A finite-element/boundary-element method for three-dimensional, large-displacement fluid-structure-interaction. Computer Methods in Applied Mechanics and Engineering, 2015, 284, 637-663.	3.4	22
39	Goal-adaptive Isogeometric Analysis with hierarchical splines. Computer Methods in Applied Mechanics and Engineering, 2014, 270, 270-292.	3.4	58
40	Discontinuities without discontinuity: The Weakly-enforced Slip Method. Computer Methods in Applied Mechanics and Engineering, 2014, 271, 144-166.	3.4	7
41	A finite-element/boundary-element method for large-displacement fluid-structure interaction with potential flow. Computer Methods in Applied Mechanics and Engineering, 2013, 266, 57-69.	3.4	10
42	Shape-Newton Method for Isogeometric Discretizations of Free-Boundary Problems. Computational Methods in Applied Sciences (Springer), 2013, , 85-102.	0.1	2
43	Flux Evaluation in Primal and Dual Boundary-Coupled Problems. Journal of Applied Mechanics, Transactions ASME, 2012, 79, .	1.1	31
44	A finite-element/boundary-element method for large-displacement fluid-structure interaction. Computational Mechanics, 2012, 50, 779-788.	2.2	30
45	Initial stress in biomechanical models of atherosclerotic plaques. Journal of Biomechanics, 2011, 44, 2376-2382.	0.9	46
46	An investigation of Interface-GMRES(R) for fluid-structure interaction problems with flutter and divergence. Computational Mechanics, 2011, 47, 17-29.	2.2	19
47	Effects of intima stiffness and plaque morphology on peak cap stress. BioMedical Engineering OnLine, 2011, 10, 25.	1.3	92
48	Partitioned iterative solution methods for fluid-structure interaction. International Journal for Numerical Methods in Fluids, 2011, 65, 3-27.	0.9	49
49	Goal-oriented error estimation and adaptivity for fluid-structure interaction using exact linearized adjoints. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 2738-2757.	3.4	42
50	A discontinuous Galerkin finite-element method for a 1D prototype of the Boltzmann equation. Journal of Computational Physics, 2011, 230, 6115-6135.	1.9	1
51	Goal-oriented adaptive methods for a Boltzmann-type equation. , 2011, , .		2
52	Initial Stress in Biomechanical Models of Atherosclerotic Plaques. , 2011, , .		0
53	On the adjoint-consistent formulation of interface conditions in goal-oriented error estimation and adaptivity for fluid-structure interaction. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 3369-3385.	3.4	14
54	Goal-Oriented Error Estimation and Adaptivity for Free-Boundary Problems: The Domain-Map Linearization Approach. SIAM Journal of Scientific Computing, 2010, 32, 1064-1092.	1.3	16

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55	Goal-Oriented Error Estimation and Adaptivity for Free-Boundary Problems: The Shape-Linearization Approach. <i>SIAM Journal of Scientific Computing</i> , 2010, 32, 1093-1118.	1.3	20
56	Added Mass Effects of Compressible and Incompressible Flows in Fluid-Structure Interaction. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2009, 76, .	1.1	118
57	Mesh association by projection along smoothed-normal-vector fields: Association of closed manifolds. <i>International Journal for Numerical Methods in Engineering</i> , 2008, 73, 493-520.	1.5	1
58	Goal-oriented error estimation for Stokes flow interacting with a flexible channel. <i>International Journal for Numerical Methods in Fluids</i> , 2008, 56, 1551-1557.	0.9	12
59	Space/time multigrid for a fluid-structure-interaction problem. <i>Applied Numerical Mathematics</i> , 2008, 58, 1951-1971.	1.2	33
60	Conservation under Incompatibility for Fluid-Solid-Interaction Problems: the NPCL Method. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2007, , 413-432.	0.1	0
61	An $H^1(\mathcal{P}^h)$ -Coercive Discontinuous Galerkin Formulation for the Poisson Problem: 1D Analysis. <i>SIAM Journal on Numerical Analysis</i> , 2006, 44, 2671-2698.	1.1	0
62	Error-amplification analysis of subiteration-preconditioned GMRES for fluid-structure interaction. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006, 195, 2124-2148.	3.4	29
63	An interface Newton-Krylov solver for fluid-structure interaction. <i>International Journal for Numerical Methods in Fluids</i> , 2005, 47, 1189-1195.	0.9	83
64	On the adjoint solution of the quasi-1D Euler equations: the effect of boundary conditions and the numerical flux function. <i>International Journal for Numerical Methods in Fluids</i> , 2005, 47, 987-993.	0.9	9
65	On the Nonnormality of Subiteration for a Fluid-Structure-Interaction Problem. <i>SIAM Journal of Scientific Computing</i> , 2005, 27, 599-621.	1.3	76
66	A monolithic approach to fluid-structure interaction. <i>Computers and Fluids</i> , 2004, 33, 839-848.	1.3	180
67	Numerical solution of steady free-surface flows by the adjoint optimal shape design method. <i>International Journal for Numerical Methods in Fluids</i> , 2003, 41, 3-27.	0.9	8
68	A pressure-invariant conservative Godunov-type method for barotropic two-fluid flows. <i>Journal of Computational Physics</i> , 2003, 185, 289-308.	1.9	41
69	Energy conservation under incompatibility for fluid-structure interaction problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2003, 192, 2727-2748.	3.4	22
70	The relevance of conservation for stability and accuracy of numerical methods for fluid-structure interaction. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2003, 192, 4195-4215.	3.4	53
71	Fix for Solution Errors near Interfaces in Two-Fluid Flow Computations. , 2003, , 523-528.		0
72	Riemann-Problem and Level-Set Approaches for Homentropic Two-Fluid Flow Computations. <i>Journal of Computational Physics</i> , 2002, 181, 654-674.	1.9	29

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73	Adjoint shape optimization for steady free-surface flows. International Journal for Numerical Methods in Fluids, 2002, 40, 605-614.	0.9	3
74	A Godunov-Type Method for Capturing Water Waves. , 2001, , 949-968.		0
75	Efficient Numerical Solution of Steady Free-Surface Navier-Stokes Flow. Journal of Computational Physics, 2001, 174, 120-137.	1.9	27
76	Numerical Solution of Steady Free-Surface Navier-Stokes Flow. , 2001, , 305-310.		0
77	Inverting elastic dislocations using the Weakly-enforced Slip Method. International Journal for Numerical and Analytical Methods in Geomechanics, 0, , .	1.7	0
78	On the effect of nonlinearity and Jacobian initialization on the convergence of the generalized Broyden quasi-Newton method. International Journal for Numerical Methods in Engineering, 0, , .	1.5	1