

Wolfgang A Wall

List of Publications by Year in descending order

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290
papers

9,942
citations

34105

52
h-index

53230

85
g-index

304
all docs

304
docs citations

304
times ranked

6245
citing authors

#	ARTICLE	IF	CITATIONS
1	Fixed-point fluid-structure interaction solvers with dynamic relaxation. <i>Computational Mechanics</i> , 2008, 43, 61-72.	4.0	521
2	Isogeometric structural shape optimization. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008, 197, 2976-2988.	6.6	420
3	Tortuosity Determination of Battery Electrodes and Separators by Impedance Spectroscopy. <i>Journal of the Electrochemical Society</i> , 2016, 163, A1373-A1387.	2.9	419
4	Artificial added mass instabilities in sequential staggered coupling of nonlinear structures and incompressible viscous flows. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2007, 196, 1278-1293.	6.6	340
5	An eXtended Finite Element Method/Lagrange multiplier based approach for fluid-structure interaction. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008, 197, 1699-1714.	6.6	225
6	A new crack tip element for the phantom-node method with arbitrary cohesive cracks. <i>International Journal for Numerical Methods in Engineering</i> , 2008, 75, 577-599.	2.8	210
7	Critical influences of particle size and adhesion on the powder layer uniformity in metal additive manufacturing. <i>Journal of Materials Processing Technology</i> , 2019, 266, 484-501.	6.3	183
8	Extended meshfree methods without branch enrichment for cohesive cracks. <i>Computational Mechanics</i> , 2007, 40, 367-382.	4.0	169
9	A Comparison of Diameter, Wall Stress, and Rupture Potential Index for Abdominal Aortic Aneurysm Rupture Risk Prediction. <i>Annals of Biomedical Engineering</i> , 2010, 38, 3124-3134.	2.5	154
10	Truly monolithic algebraic multigrid for fluid-structure interaction. <i>International Journal for Numerical Methods in Engineering</i> , 2011, 85, 987-1016.	2.8	153
11	A computational strategy for prestressing patient-specific biomechanical problems under finite deformation. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2010, 26, 52-72.	2.1	126
12	A dual mortar approach for 3D finite deformation contact with consistent linearization. <i>International Journal for Numerical Methods in Engineering</i> , 2010, 83, 1428-1465.	2.8	123
13	A finite deformation mortar contact formulation using a primal-dual active set strategy. <i>International Journal for Numerical Methods in Engineering</i> , 2009, 79, 1354-1391.	2.8	122
14	Geometrically Exact Finite Element Formulations for Slender Beams: Kirchhoff-Love Theory Versus Simo-Reissner Theory. <i>Archives of Computational Methods in Engineering</i> , 2019, 26, 163-243.	10.2	114
15	Modeling and characterization of cohesion in fine metal powders with a focus on additive manufacturing process simulations. <i>Powder Technology</i> , 2019, 343, 855-866.	4.2	107
16	Coupling strategies for biomedical fluid-structure interaction problems. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2010, 26, 305-321.	2.1	106
17	Fluid-structure interaction in lower airways of CT-based lung geometries. <i>International Journal for Numerical Methods in Fluids</i> , 2008, 57, 653-675.	1.6	104
18	An objective 3D large deformation finite element formulation for geometrically exact curved Kirchhoff rods. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014, 278, 445-478.	6.6	101

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19	A strong coupling partitioned approach for fluid-structure interaction with free surfaces. <i>Computers and Fluids</i> , 2007, 36, 169-183.	2.5	96
20	Measuring and modeling patient-specific distributions of material properties in abdominal aortic aneurysm wall. <i>Biomechanics and Modeling in Mechanobiology</i> , 2013, 12, 717-733.	2.8	91
21	A three-level finite element method for the instationary incompressible Navier-Stokes equations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2004, 193, 1323-1366.	6.6	88
22	Prestressing in finite deformation abdominal aortic aneurysm simulation. <i>Journal of Biomechanics</i> , 2009, 42, 1732-1739.	2.1	87
23	Quadrature schemes for arbitrary convex/concave volumes and integration of weak form in enriched partition of unity methods. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2013, 258, 39-54.	6.6	86
24	A Solution for the Incompressibility Dilemma in Partitioned Fluid-Structure Interaction with Pure Dirichlet Fluid Domains. <i>Computational Mechanics</i> , 2006, 38, 417-429.	4.0	85
25	An embedded Dirichlet formulation for 3D continua. <i>International Journal for Numerical Methods in Engineering</i> , 2010, 82, 537-563.	2.8	83
26	Dual Quadratic Mortar Finite Element Methods for 3D Finite Deformation Contact. <i>SIAM Journal of Scientific Computing</i> , 2012, 34, B421-B446.	2.8	79
27	The importance of the pericardium for cardiac biomechanics: from physiology to computational modeling. <i>Biomechanics and Modeling in Mechanobiology</i> , 2019, 18, 503-529.	2.8	78
28	Impact of calcifications on patient-specific wall stress analysis of abdominal aortic aneurysms. <i>Biomechanics and Modeling in Mechanobiology</i> , 2010, 9, 511-521.	2.8	77
29	Isogeometric dual mortar methods for computational contact mechanics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016, 301, 259-280.	6.6	77
30	Towards efficient uncertainty quantification in complex and large-scale biomechanical problems based on a Bayesian multi-fidelity scheme. <i>Biomechanics and Modeling in Mechanobiology</i> , 2015, 14, 489-513.	2.8	76
31	Determination of Transport Parameters in Liquid Binary Lithium Ion Battery Electrolytes. <i>Journal of the Electrochemical Society</i> , 2017, 164, A826-A836.	2.9	76
32	Finite deformation frictional mortar contact using a semi-smooth Newton method with consistent linearization. <i>International Journal for Numerical Methods in Engineering</i> , 2010, 84, 543-571.	2.8	74
33	The impact of model assumptions on results of computational mechanics in abdominal aortic aneurysm. <i>Journal of Vascular Surgery</i> , 2010, 51, 679-688.	1.1	73
34	Local Strain Distribution in Real Three-Dimensional Alveolar Geometries. <i>Annals of Biomedical Engineering</i> , 2011, 39, 2835-2843.	2.5	71
35	Structural polymorphism in heterogeneous cytoskeletal networks. <i>Soft Matter</i> , 2009, 5, 1796.	2.7	70
36	3D fluid-structure-contact interaction based on a combined XFEM FSI and dual mortar contact approach. <i>Computational Mechanics</i> , 2010, 46, 53-67.	4.0	67

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37	Material model of lung parenchyma based on living precision-cut lung slice testing. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2011, 4, 583-592.	3.1	66
38	Improved robustness and consistency of 3D contact algorithms based on a dual mortar approach. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2013, 264, 67-80.	6.6	66
39	A new face-oriented stabilized XFEM approach for 2D and 3D incompressible Navier-Stokes equations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014, 276, 233-265.	6.6	66
40	Shell structures-a sensitive interrelation between physics and numerics. <i>International Journal for Numerical Methods in Engineering</i> , 2004, 60, 381-427.	2.8	64
41	On the geometric conservation law in transient flow calculations on deforming domains. <i>International Journal for Numerical Methods in Fluids</i> , 2006, 50, 1369-1379.	1.6	64
42	Segment-based vs. element-based integration for mortar methods in computational contact mechanics. <i>Computational Mechanics</i> , 2015, 55, 209-228.	4.0	63
43	Rheology of Semiflexible Bundle Networks with Transient Linkers. <i>Physical Review Letters</i> , 2014, 112, 238102.	7.8	61
44	An algebraic variational multiscale-multigrid method for large eddy simulation of turbulent flow. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2010, 199, 853-864.	6.6	59
45	Fluid-structure interaction for non-conforming interfaces based on a dual mortar formulation. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2011, 200, 3111-3126.	6.6	59
46	A high-order semi-explicit discontinuous Galerkin solver for 3D incompressible flow with application to DNS and LES of turbulent channel flow. <i>Journal of Computational Physics</i> , 2017, 348, 634-659.	3.8	59
47	A Performance Comparison of Continuous and Discontinuous Galerkin Methods with Fast Multigrid Solvers. <i>SIAM Journal of Scientific Computing</i> , 2018, 40, A3423-A3448.	2.8	59
48	A unified approach for beam-to-beam contact. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017, 315, 972-1010.	6.6	57
49	A uniform nodal strain tetrahedron with isochoric stabilization. <i>International Journal for Numerical Methods in Engineering</i> , 2009, 78, 429-443.	2.8	55
50	A finite element approach for the line-to-line contact interaction of thin beams with arbitrary orientation. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016, 308, 377-413.	6.6	55
51	Vector Extrapolation for Strong Coupling Fluid-Structure Interaction Solvers. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2009, 76, .	2.2	54
52	Computational study of the drag and oscillatory movement of biofilm streamers in fast flows. <i>Biotechnology and Bioengineering</i> , 2010, 105, 600-610.	3.3	54
53	A locking-free finite element formulation and reduced models for geometrically exact Kirchhoff rods. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2015, 290, 314-341.	6.6	54
54	Coupled and reduced dimensional modeling of respiratory mechanics during spontaneous breathing. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2013, 29, 1285-1305.	2.1	53

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55	Large eddy simulation of turbulent incompressible flows by a three-level finite element method. International Journal for Numerical Methods in Fluids, 2005, 48, 1067-1099.	1.6	52
56	A symmetric method for weakly imposing Dirichlet boundary conditions in embedded finite element meshes. International Journal for Numerical Methods in Engineering, 2012, 90, 636-658.	2.8	52
57	An accurate, robust, and easy-to-implement method for integration over arbitrary polyhedra: Application to embedded interface methods. Journal of Computational Physics, 2014, 273, 393-415.	3.8	52
58	A cut-cell finite volume " finite element coupling approach for fluid"structure interaction in compressible flow. Journal of Computational Physics, 2016, 307, 670-695.	3.8	51
59	A general approach for modeling interacting flow through porous media under finite deformations. Computer Methods in Applied Mechanics and Engineering, 2015, 283, 1240-1259.	6.6	50
60	Structured Tree Impedance Outflow Boundary Conditions for 3D Lung Simulations. Journal of Biomechanical Engineering, 2010, 132, 081002.	1.3	48
61	A face-oriented stabilized Nitsche-type extended variational multiscale method for incompressible two-phase flow. International Journal for Numerical Methods in Engineering, 2015, 104, 721-748.	2.8	48
62	Towards a comprehensive computational model for the respiratory system. International Journal for Numerical Methods in Biomedical Engineering, 2010, 26, 807-827.	2.1	47
63	Biaxial distension of precision-cut lung slices. Journal of Applied Physiology, 2010, 108, 713-721.	2.5	47
64	Dual mortar methods for computational contact mechanics " overview and recent developments. GAMM Mitteilungen, 2014, 37, 66-84.	5.5	46
65	A stabilized Nitsche cut finite element method for the Oseen problem. Computer Methods in Applied Mechanics and Engineering, 2018, 328, 262-300.	6.6	45
66	Fluid"structure interaction approaches on fixed grids based on two different domain decomposition ideas. International Journal of Computational Fluid Dynamics, 2008, 22, 411-427.	1.2	42
67	Engineering Mechanics 2. , 2011, , .		41
68	Adjoint-based inverse analysis of windkessel parameters for patient-specific vascular models. Journal of Computational Physics, 2013, 244, 113-130.	3.8	41
69	Direct Electrochemical Determination of Thermodynamic Factors in Aprotic Binary Electrolytes. Journal of the Electrochemical Society, 2016, 163, A1254-A1264.	2.9	41
70	Large Deformation Fluid-Structure Interaction " Advances in ALE Methods and New Fixed Grid Approaches. , 2006, , 195-232.		40
71	Time-dependent subgrid scales in residual-based large eddy simulation of turbulent channel flow. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 819-827.	6.6	40
72	An abstract framework for a priori estimates for contact problems in 3D with quadratic finite elements. Computational Mechanics, 2012, 49, 735-747.	4.0	40

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73	Benchmark problems for numerical treatment of backflow at open boundaries. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e2918.	2.1	40
74	A novel two-layer, coupled finite element approach for modeling the nonlinear elastic and viscoelastic behavior of human erythrocytes. Biomechanics and Modeling in Mechanobiology, 2011, 10, 445-459.	2.8	39
75	Interface handling for three-dimensional higher-order XFEM computations in fluid-structure interaction. International Journal for Numerical Methods in Engineering, 2009, 79, 846-869.	2.8	38
76	A novel formulation for Neumann inflow boundary conditions in biomechanics. International Journal for Numerical Methods in Biomedical Engineering, 2012, 28, 560-573.	2.1	38
77	Dynamic modeling of uteroplacental blood flow in IUGR indicates vortices and elevated pressure in the intervillous space – a pilot study. Scientific Reports, 2017, 7, 40771.	3.3	38
78	Micromechanical simulations of biopolymer networks with finite elements. Journal of Computational Physics, 2013, 244, 236-251.	3.8	37
79	A Nitsche cut finite element method for the Oseen problem with general Navier boundary conditions. Computer Methods in Applied Mechanics and Engineering, 2018, 330, 220-252.	6.6	37
80	A comprehensive computational human lung model incorporating inter-acinar dependencies: Application to spontaneous breathing and mechanical ventilation. International Journal for Numerical Methods in Biomedical Engineering, 2017, 33, e02787.	2.1	36
81	Geometrically exact beam elements and smooth contact schemes for the modeling of fiber-based materials and structures. International Journal of Solids and Structures, 2018, 154, 124-146.	2.7	36
82	A novel smoothed particle hydrodynamics formulation for thermo-capillary phase change problems with focus on metal additive manufacturing melt pool modeling. Computer Methods in Applied Mechanics and Engineering, 2021, 381, 113812.	6.6	36
83	A Temporal Consistent Monolithic Approach to Fluid-Structure Interaction Enabling Single Field Predictors. SIAM Journal of Scientific Computing, 2015, 37, B30-B59.	2.8	35
84	Determination of Transport Parameters in Liquid Binary Electrolytes: Part II. Transference Number. Journal of the Electrochemical Society, 2017, 164, A2716-A2731.	2.9	33
85	A deformation dependent stabilization technique, exemplified by EAS elements at large strains. Computer Methods in Applied Mechanics and Engineering, 2000, 188, 859-871.	6.6	32
86	Residual-based variational multiscale methods for laminar, transitional and turbulent variable-density flow at low Mach number. International Journal for Numerical Methods in Fluids, 2011, 65, 1260-1278.	1.6	32
87	Equilibrium phase diagram of semi-flexible polymer networks with linkers. Europhysics Letters, 2013, 102, 38003.	2.0	32
88	Robust and efficient discontinuous Galerkin methods for under-resolved turbulent incompressible flows. Journal of Computational Physics, 2018, 372, 667-693.	3.8	32
89	Enhancement of fixed-grid methods towards complex fluid-structure interaction applications. International Journal for Numerical Methods in Fluids, 2008, 57, 1227-1248.	1.6	31
90	Modeling the Mechanical Behavior of Lung Tissue at the Microlevel. Journal of Engineering Mechanics - ASCE, 2009, 135, 434-438.	2.9	31

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91	An extended residual-based variational multiscale method for two-phase flow including surface tension. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2011, 200, 1866-1876.	6.6	31
92	Unified computational framework for the efficient solution of n -field coupled problems with monolithic schemes. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016, 310, 335-366.	6.6	31
93	On the stability of projection methods for the incompressible Navier–Stokes equations based on high-order discontinuous Galerkin discretizations. <i>Journal of Computational Physics</i> , 2017, 351, 392-421.	3.8	31
94	Computational modelling of the respiratory system: Discussion of coupled modelling approaches and two recent extensions. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017, 314, 473-493.	6.6	31
95	Efficiency of high-performance discontinuous Galerkin spectral element methods for under-resolved turbulent incompressible flows. <i>International Journal for Numerical Methods in Fluids</i> , 2018, 88, 32-54.	1.6	31
96	Numerical identification method for the non-linear viscoelastic compressible behavior of soft tissue using uniaxial tensile tests and image registration – Application to rat lung parenchyma. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2014, 29, 360-374.	3.1	30
97	Comparison of implicit and explicit hybridizable discontinuous Galerkin methods for the acoustic wave equation. <i>International Journal for Numerical Methods in Engineering</i> , 2016, 106, 712-739.	2.8	30
98	Direct Numerical Simulation of Flow over Periodic Hills up to $Re_H = 10^5$. <i>Flow, Turbulence and Combustion</i> , 2018, 101, 521-551.	2.6	30
99	A curvilinear high order finite element framework for electromechanics: From linearised electro-elasticity to massively deformable dielectric elastomers. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2018, 329, 75-117.	6.6	29
100	A viscoelastic nonlinear compressible material model of lung parenchyma – Experiments and numerical identification. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 94, 164-175.	3.1	29
101	Finite-element approach to Brownian dynamics of polymers. <i>Physical Review E</i> , 2009, 80, 066704.	2.1	28
102	Probabilistic noninvasive prediction of wall properties of abdominal aortic aneurysms using Bayesian regression. <i>Biomechanics and Modeling in Mechanobiology</i> , 2017, 16, 45-61.	2.8	28
103	Monolithic cut finite-element-based approaches for fluid–structure interaction. <i>International Journal for Numerical Methods in Engineering</i> , 2019, 119, 757-796.	2.8	28
104	A continuum description of the damage process in the arterial wall of abdominal aortic aneurysms. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2012, 28, 87-99.	2.1	27
105	An approach for vascular tumor growth based on a hybrid embedded/homogenized treatment of the vasculature within a multiphase porous medium model. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2019, 35, e3253.	2.1	26
106	Nitsche’s method for finite deformation thermomechanical contact problems. <i>Computational Mechanics</i> , 2019, 63, 1091-1110.	4.0	26
107	Parallel multilevel solution of nonlinear shell structures. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2005, 194, 2513-2533.	6.6	25
108	Consistent finite-element approach to Brownian polymer dynamics with anisotropic friction. <i>Physical Review E</i> , 2010, 82, 066705.	2.1	25

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109	Correlation of biomechanics to tissue reaction in aortic aneurysms assessed by finite elements and [18F]â€“fluorodeoxyglucoseâ€“PET/CT. International Journal for Numerical Methods in Biomedical Engineering, 2012, 28, 456-471.	2.1	25
110	Adaptive time stepping for fluid-structure interaction solvers. Finite Elements in Analysis and Design, 2018, 141, 55-69.	3.2	25
111	An algebraic variational multiscaleâ€“multigrid method for large-eddy simulation of turbulent variable-density flow at low Mach number. Journal of Computational Physics, 2010, 229, 6047-6070.	3.8	24
112	A semi-smooth Newton method for orthotropic plasticity and frictional contact at finite strains. Computer Methods in Applied Mechanics and Engineering, 2015, 285, 228-254.	6.6	24
113	A 3D finite element approach for the coupled numerical simulation of electrochemical systems and fluid flow. International Journal for Numerical Methods in Engineering, 2011, 86, 1339-1359.	2.8	23
114	Interaction of Biomechanics with Extracellular Matrix Components in Abdominal Aortic Aneurysm Wall. European Journal of Vascular and Endovascular Surgery, 2015, 50, 167-174.	1.5	23
115	Correlation between alveolar ventilation and electrical properties of lung parenchyma. Physiological Measurement, 2015, 36, 1211-1226.	2.1	23
116	A consistent approach for fluidâ€“structureâ€“contact interaction based on a porous flow model for rough surface contact. International Journal for Numerical Methods in Engineering, 2019, 119, 1345-1378.	2.8	23
117	A Nitsche-based cut finite element method for the coupling of incompressible fluid flow with poroelasticity. Computer Methods in Applied Mechanics and Engineering, 2019, 351, 253-280.	6.6	23
118	A computational framework for modeling cellâ€“matrix interactions in soft biological tissues. Biomechanics and Modeling in Mechanobiology, 2021, 20, 1851-1870.	2.8	23
119	Robust adaptive remeshing strategy for large deformation, transient impact simulations. International Journal for Numerical Methods in Engineering, 2006, 65, 2139-2166.	2.8	22
120	Stabilized finite element formulation for incompressible flow on distorted meshes. International Journal for Numerical Methods in Fluids, 2009, 60, 1103-1126.	1.6	22
121	An XFEMâ€“based embedding mesh technique for incompressible viscous flows. International Journal for Numerical Methods in Fluids, 2011, 65, 166-190.	1.6	21
122	Using parametric model order reduction for inverse analysis of large nonlinear cardiac simulations. International Journal for Numerical Methods in Biomedical Engineering, 2020, 36, e3320.	2.1	21
123	A novel smoothed particle hydrodynamics and finite element coupling scheme for fluidâ€“structure interaction: The sliding boundary particle approach. Computer Methods in Applied Mechanics and Engineering, 2021, 383, 113922.	6.6	21
124	Hybrid multigrid methods for high-order discontinuous Galerkin discretizations. Journal of Computational Physics, 2020, 415, 109538.	3.8	21
125	On phase change and latent heat models in metal additive manufacturing process simulation. Advanced Modeling and Simulation in Engineering Sciences, 2020, 7, .	1.7	21
126	Towards a taxonomy for multiscale methods in computational mechanics: building blocks of existing methods. Computational Mechanics, 2007, 41, 279-291.	4.0	20

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127	An algebraic variational multiscale “multigrid method based on plain aggregation for convection–diffusion problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2009, 198, 3821-3835.	6.6	20
128	A monolithic computational approach to thermo–structure interaction. <i>International Journal for Numerical Methods in Engineering</i> , 2013, 95, 1053-1078.	2.8	20
129	A monolithic multiphase porous medium framework for (a-)vascular tumor growth. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2018, 340, 657-683.	6.6	20
130	A matrix-free high-order discontinuous Galerkin compressible Navier–Stokes solver: A performance comparison of compressible and incompressible formulations for turbulent incompressible flows. <i>International Journal for Numerical Methods in Fluids</i> , 2019, 89, 71-102.	1.6	20
131	A nested dynamic multi-scale approach for 3D problems accounting for micro-scale multi-physics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2010, 199, 1342-1351.	6.6	19
132	Resolution of sub-element length scales in Brownian dynamics simulations of biopolymer networks with geometrically exact beam finite elements. <i>Journal of Computational Physics</i> , 2015, 303, 185-202.	3.8	19
133	Contact-free determination of material characteristics using a newly developed pressure-operated strain-applying bioreactor. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2008, 86B, 483-492.	3.4	18
134	An isogeometric variational multiscale method for large-eddy simulation of coupled multi-ion transport in turbulent flow. <i>Journal of Computational Physics</i> , 2013, 251, 194-208.	3.8	18
135	A stable approach for coupling multidimensional cardiovascular and pulmonary networks based on a novel pressure-flow rate or pressure-only Neumann boundary condition formulation. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2014, 30, 447-469.	2.1	18
136	A new approach to wall modeling in LES of incompressible flow via function enrichment. <i>Journal of Computational Physics</i> , 2016, 316, 94-116.	3.8	18
137	The impact of personalized probabilistic wall thickness models on peak wall stress in abdominal aortic aneurysms. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2018, 34, e2922.	2.1	18
138	A coupled approach for identification of nonlinear and compressible material models for soft tissue based on different experimental setups – Exemplified and detailed for lung parenchyma. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 94, 126-143.	3.1	18
139	Extension of a multiphase tumour growth model to study nanoparticle delivery to solid tumours. <i>PLoS ONE</i> , 2020, 15, e0228443.	2.5	18
140	ExaDG: High-Order Discontinuous Galerkin for the Exa-Scale. <i>Lecture Notes in Computational Science and Engineering</i> , 2020, , 189-224.	0.3	18
141	An algebraic variational multiscale-multigrid method for large-eddy simulation: generalized- $\frac{1}{2}$ time integration, Fourier analysis and application to turbulent flow past a square-section cylinder. <i>Computational Mechanics</i> , 2011, 47, 217-233.	4.0	17
142	A computational approach for the simulation of natural convection in electrochemical cells. <i>Journal of Computational Physics</i> , 2013, 235, 764-785.	3.8	17
143	Constituent-specific material behavior of soft biological tissue: experimental quantification and numerical identification for lung parenchyma. <i>Biomechanics and Modeling in Mechanobiology</i> , 2019, 18, 1383-1400.	2.8	17
144	A monolithic approach to fluid–structure interaction based on a hybrid Eulerian–ALE fluid domain decomposition involving cut elements. <i>International Journal for Numerical Methods in Engineering</i> , 2019, 119, 208-237.	2.8	17

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145	Glucose Metabolism in the Vessel Wall Correlates With Mechanical Instability and Inflammatory Changes in a Patient With a Growing Aneurysm of the Abdominal Aorta. <i>Circulation: Cardiovascular Imaging</i> , 2009, 2, 507-509.	2.6	16
146	A stabilized finite element method for the numerical simulation of multi-ion transport in electrochemical systems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2012, 223-224, 199-210.	6.6	16
147	Wall modeling via function enrichment within a high-order DG method for RANS simulations of incompressible flow. <i>International Journal for Numerical Methods in Fluids</i> , 2018, 86, 107-129.	1.6	16
148	Efficient Explicit Time Stepping of High Order Discontinuous Galerkin Schemes for Waves. <i>SIAM Journal of Scientific Computing</i> , 2018, 40, C803-C826.	2.8	16
149	Gas exchange mechanisms in preterm infants on HFOV – a computational approach. <i>Scientific Reports</i> , 2018, 8, 13008.	3.3	16
150	A dual mortar approach for mesh tying within a variational multiscale method for incompressible flow. <i>International Journal for Numerical Methods in Fluids</i> , 2014, 76, 1-27.	1.6	15
151	Coupling of EIT with computational lung modeling for predicting patient-specific ventilatory responses. <i>Journal of Applied Physiology</i> , 2017, 122, 855-867.	2.5	15
152	An adaptive hybridizable discontinuous Galerkin approach for cardiac electrophysiology. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2018, 34, e2959.	2.1	15
153	Fluid-structure interaction including volumetric coupling with homogenised subdomains for modeling respiratory mechanics. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2017, 33, e2812.	2.1	14
154	A computational approach for thermo-elasto-plastic frictional contact based on a monolithic formulation using non-smooth nonlinear complementarity functions. <i>Advanced Modeling and Simulation in Engineering Sciences</i> , 2018, 5, .	1.7	14
155	ExWave: A high performance discontinuous Galerkin solver for the acoustic wave equation. <i>SoftwareX</i> , 2019, 9, 49-54.	2.6	14
156	An algebraic variational multiscale – multigrid method for large-eddy simulation of turbulent pulsatile flows in complex geometries with detailed insight into pulmonary airway flow. <i>International Journal for Numerical Methods in Fluids</i> , 2013, 71, 1207-1225.	1.6	13
157	Influence of unsteady aerodynamics on driving dynamics of passenger cars. <i>Vehicle System Dynamics</i> , 2014, 52, 1470-1488.	3.7	13
158	Computational analysis of morphologies and phase transitions of cross-linked, semi-flexible polymer networks. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2015, 471, 20150332.	2.1	13
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