

Charbel Farhat

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214
papers

15,002
citations

67
h-index

118
g-index

235
ext. papers

16,949
ext. citations

3.2
avg, IF

6.81
L-index

#	Paper	IF	Citations
214	A method of finite element tearing and interconnecting and its parallel solution algorithm. <i>International Journal for Numerical Methods in Engineering</i> , 1991 , 32, 1205-1227	2.4	806
213	Partitioned analysis of coupled mechanical systems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2001 , 190, 3247-3270	5.7	453
212	Load and motion transfer algorithms for fluid/structure interaction problems with non-matching discrete interfaces: Momentum and energy conservation, optimal discretization and application to aeroelasticity. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1998 , 157, 95-114	5.7	435
211	FETI-DP: a dual-primal unified FETI method part I: A faster alternative to the two-level FETI method. <i>International Journal for Numerical Methods in Engineering</i> , 2001 , 50, 1523-1544	2.4	399
210	Interpolation Method for Adapting Reduced-Order Models and Application to Aeroelasticity. <i>AIAA Journal</i> , 2008 , 46, 1803-1813	2.1	387
209	Torsional springs for two-dimensional dynamic unstructured fluid meshes. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1998 , 163, 231-245	5.7	333
208	Efficient non-linear model reduction via a least-squares Petrov-Galerkin projection and compressive tensor approximations. <i>International Journal for Numerical Methods in Engineering</i> , 2011 , 86, 155-181	2.4	319
207	The GNAT method for nonlinear model reduction: Effective implementation and application to computational fluid dynamics and turbulent flows. <i>Journal of Computational Physics</i> , 2013 , 242, 623-647	4.1	305
206	Two efficient staggered algorithms for the serial and parallel solution of three-dimensional nonlinear transient aeroelastic problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2000 , 182, 499-515	5.7	302
205	The discontinuous enrichment method. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2001 , 190, 6455-6479	5.7	276
204	Geometric conservation laws for flow problems with moving boundaries and deformable meshes, and their impact on aeroelastic computations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1996 , 134, 71-90	5.7	268
203	Mixed explicit/implicit time integration of coupled aeroelastic problems: Three-field formulation, geometric conservation and distributed solution. <i>International Journal for Numerical Methods in Fluids</i> , 1995 , 21, 807-835	1.9	267
202	Provably second-order time-accurate loosely-coupled solution algorithms for transient nonlinear computational aeroelasticity. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006 , 195, 1973-2001	5.7	248
201	The Discrete Geometric Conservation Law and the Nonlinear Stability of ALE Schemes for the Solution of Flow Problems on Moving Grids. <i>Journal of Computational Physics</i> , 2001 , 174, 669-694	4.1	248
200	Partitioned procedures for the transient solution of coupled aeroelastic problems Part I: Model problem, theory and two-dimensional application. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1995 , 124, 79-112	5.7	246
199	Optimal convergence properties of the FETI domain decomposition method. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1994 , 115, 365-385	5.7	243
198	A scalable dual-primal domain decomposition method. <i>Numerical Linear Algebra With Applications</i> , 2000 , 7, 687-714	1.6	230

197	A simple and efficient automatic fem domain decomposer. <i>Computers and Structures</i> , 1988 , 28, 579-602	4.5	222
196	A three-dimensional torsional spring analogy method for unstructured dynamic meshes. <i>Computers and Structures</i> , 2002 , 80, 305-316	4.5	218
195	Partitioned procedures for the transient solution of coupled aeroelastic problems [Part II: energy transfer analysis and three-dimensional applications. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2001 , 190, 3147-3170	5.7	210
194	Updating finite element dynamic models using an element-by-element sensitivity methodology. <i>AIAA Journal</i> , 1993 , 31, 1702-1711	2.1	200
193	Reduced-order fluid/structure modeling of a complete aircraft configuration. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006 , 195, 5730-5742	5.7	199
192	Nonlinear model order reduction based on local reduced-order bases. <i>International Journal for Numerical Methods in Engineering</i> , 2012 , 92, 891-916	2.4	198
191	A discontinuous Galerkin method with Lagrange multipliers for the solution of Helmholtz problems in the mid-frequency regime. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2003 , 192, 1389-1419	5.7	182
190	Multiphysics simulations: Challenges and opportunities. <i>International Journal of High Performance Computing Applications</i> , 2013 , 27, 4-83	1.8	179
189	An Online Method for Interpolating Linear Parametric Reduced-Order Models. <i>SIAM Journal of Scientific Computing</i> , 2011 , 33, 2169-2198	2.6	175
188	Application of a three-field nonlinear fluid-structure formulation to the prediction of the aeroelastic parameters of an F-16 fighter. <i>Computers and Fluids</i> , 2003 , 32, 3-29	2.8	172
187	Bubble functions prompt unusual stabilized finite element methods. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1995 , 123, 299-308	5.7	153
186	Automatic partitioning of unstructured meshes for the parallel solution of problems in computational mechanics. <i>International Journal for Numerical Methods in Engineering</i> , 1993 , 36, 745-764	2.4	146
185	Time-decomposed parallel time-integrators: theory and feasibility studies for fluid, structure, and fluid-structure applications. <i>International Journal for Numerical Methods in Engineering</i> , 2003 , 58, 1397-1434	2.4	141
184	Dimensional reduction of nonlinear finite element dynamic models with finite rotations and energy-based mesh sampling and weighting for computational efficiency. <i>International Journal for Numerical Methods in Engineering</i> , 2014 , 98, 625-662	2.4	139
183	Aeroelastic Dynamic Analysis of a Full F-16 Configuration for Various Flight Conditions. <i>AIAA Journal</i> , 2003 , 41, 363-371	2.1	139
182	On the significance of the geometric conservation law for flow computations on moving meshes. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2000 , 190, 1467-1482	5.7	137
181	A method for interpolating on manifolds structural dynamics reduced-order models. <i>International Journal for Numerical Methods in Engineering</i> , 2009 , 80, 1241-1258	2.4	136
180	Second-order time-accurate and geometrically conservative implicit schemes for flow computations on unstructured dynamic meshes. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1999 , 170, 103-129	5.7	131

179	An Unconventional Domain Decomposition Method for an Efficient Parallel Solution of Large-Scale Finite Element Systems. <i>SIAM Journal on Scientific and Statistical Computing</i> , 1992 , 13, 379-396		128
178	A variational multiscale method for the large eddy simulation of compressible turbulent flows on unstructured meshes—Application to vortex shedding. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2004 , 193, 1367-1383	5.7	125
177	Residual-free bubbles for the Helmholtz equation. <i>International Journal for Numerical Methods in Engineering</i> , 1997 , 40, 4003-4009	2.4	121
176	Matching fluid and structure meshes for aeroelastic computations: A parallel approach. <i>Computers and Structures</i> , 1995 , 54, 779-785	4.5	118
175	Adaptation of Aeroelastic Reduced-Order Models and Application to an F-16 Configuration. <i>AIAA Journal</i> , 2007 , 45, 1244-1257	2.1	112
174	The two-level FETI method for static and dynamic plate problems Part I: An optimal iterative solver for biharmonic systems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1998 , 155, 129-151	5.7	110
173	Design and analysis of ALE schemes with provable second-order time-accuracy for inviscid and viscous flow simulations. <i>Journal of Computational Physics</i> , 2003 , 191, 206-227	4.1	109
172	The second generation FETI methods and their application to the parallel solution of large-scale linear and geometrically non-linear structural analysis problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2000 , 184, 333-374	5.7	108
171	Structure-preserving, stability, and accuracy properties of the energy-conserving sampling and weighting method for the hyper reduction of nonlinear finite element dynamic models. <i>International Journal for Numerical Methods in Engineering</i> , 2015 , 102, 1077-1110	2.4	107
170	Stabilization of projection-based reduced-order models. <i>International Journal for Numerical Methods in Engineering</i> , 2012 , 91, 358-377	2.4	105
169	A simple and efficient extension of a class of substructure based preconditioners to heterogeneous structural mechanics problems. <i>International Journal for Numerical Methods in Engineering</i> , 1999 , 44, 489-516	2.4	104
168	Sensitivity analysis and design optimization of three-dimensional non-linear aeroelastic systems by the adjoint method. <i>International Journal for Numerical Methods in Engineering</i> , 2003 , 56, 911-933	2.4	96
167	Towards Real-Time Computational-Fluid-Dynamics-Based Aeroelastic Computations Using a Database of Reduced-Order Information. <i>AIAA Journal</i> , 2010 , 48, 2029-2037	2.1	94
166	Two-level domain decomposition methods with Lagrange multipliers for the fast iterative solution of acoustic scattering problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2000 , 184, 213-239	5.7	94
165	A two-level domain decomposition method for the iterative solution of high frequency exterior Helmholtz problems. <i>Numerische Mathematik</i> , 2000 , 85, 283-308	2.2	94
164	A scalable Lagrange multiplier based domain decomposition method for time-dependent problems. <i>International Journal for Numerical Methods in Engineering</i> , 1995 , 38, 3831-3853	2.4	92
163	Dynamic implosion of underwater cylindrical shells: Experiments and Computations. <i>International Journal of Solids and Structures</i> , 2013 , 50, 2943-2961	3.1	84
162	A higher-order generalized ghost fluid method for the poor for the three-dimensional two-phase flow computation of underwater implosions. <i>Journal of Computational Physics</i> , 2008 , 227, 7674-7700	4.1	83

161	Higher-Order Subiteration-Free Staggered Algorithm for Nonlinear Transient Aeroelastic Problems. <i>AIAA Journal</i> , 1998 , 36, 1754-1757	2.1	83
160	A new finite element concurrent computer program architecture. <i>International Journal for Numerical Methods in Engineering</i> , 1987 , 24, 1771-1792	2.4	80
159	A numerically scalable domain decomposition method for the solution of frictionless contact problems. <i>International Journal for Numerical Methods in Engineering</i> , 2001 , 50, 2643-2666	2.4	78
158	Design optimization using hyper-reduced-order models. <i>Structural and Multidisciplinary Optimization</i> , 2015 , 51, 919-940	3.6	76
157	FETI-DPH: A DUAL-PRIMAL DOMAIN DECOMPOSITION METHOD FOR ACOUSTIC SCATTERING. <i>Journal of Computational Acoustics</i> , 2005 , 13, 499-524		76
156	Progressive construction of a parametric reduced-order model for PDE-constrained optimization. <i>International Journal for Numerical Methods in Engineering</i> , 2015 , 102, 1111-1135	2.4	73
155	The two-level FETI method Part II: Extension to shell problems, parallel implementation and performance results. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1998 , 155, 153-179	5.7	73
154	Application of the FETI method to ASCI problems—scalability results on 1000 processors and discussion of highly heterogeneous problems. <i>International Journal for Numerical Methods in Engineering</i> , 2000 , 47, 513-535	2.4	73
153	Extending substructure based iterative solvers to multiple load and repeated analyses. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1994 , 117, 195-209	5.7	73
152	A parallel active column equation solver. <i>Computers and Structures</i> , 1988 , 28, 289-304	4.5	73
151	Robust and provably second-order explicit–explicit and implicit–explicit staggered time-integrators for highly non-linear compressible fluid–structure interaction problems. <i>International Journal for Numerical Methods in Engineering</i> , 2010 , 84, 73-107	2.4	71
150	Design and analysis of robust ALE time-integrators for the solution of unsteady flow problems on moving grids. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2004 , 193, 4073-4095	5.7	70
149	A transient FETI methodology for large-scale parallel implicit computations in structural mechanics. <i>International Journal for Numerical Methods in Engineering</i> , 1994 , 37, 1945-1975	2.4	70
148	The discontinuous enrichment method for multiscale analysis. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2003 , 192, 3195-3209	5.7	69
147	Algorithms for interface treatment and load computation in embedded boundary methods for fluid and fluid–structure interaction problems. <i>International Journal for Numerical Methods in Fluids</i> , 2011 , 67, 1175-1206	1.9	67
146	Three-dimensional discontinuous Galerkin elements with plane waves and Lagrange multipliers for the solution of mid-frequency Helmholtz problems. <i>International Journal for Numerical Methods in Engineering</i> , 2006 , 66, 796-815	2.4	64
145	A low-cost, goal-oriented ℓ_2 -compact proper orthogonal decomposition basis for model reduction of static systems. <i>International Journal for Numerical Methods in Engineering</i> , 2011 , 86, 381-402	2.4	63
144	On the general solution by a direct method of a large-scale singular system of linear equations: application to the analysis of floating structures. <i>International Journal for Numerical Methods in Engineering</i> , 1998 , 41, 675-696	2.4	63

143	An unconditionally stable staggered algorithm for transient finite element analysis of coupled thermoelastic problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1991 , 85, 349-365	5.7	61
142	A general approach to nonlinear FE computations on shared-memory multiprocessors. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1989 , 72, 153-171	5.7	61
141	Higher-order extensions of a discontinuous Galerkin method for mid-frequency Helmholtz problems. <i>International Journal for Numerical Methods in Engineering</i> , 2004 , 61, 1938-1956	2.4	58
140	A lagrange multiplier based divide and conquer finite element algorithm. <i>Computing Systems in Engineering: an International Journal</i> , 1991 , 2, 149-156		58
139	Time-parallel implicit integrators for the near-real-time prediction of linear structural dynamic responses. <i>International Journal for Numerical Methods in Engineering</i> , 2006 , 67, 697-724	2.4	57
138	On a component mode synthesis method and its application to incompatible substructures. <i>Computers and Structures</i> , 1994 , 51, 459-473	4.5	56
137	A linearized method for the frequency analysis of three-dimensional fluid/structure interaction problems in all flow regimes. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2001 , 190, 3121-3146	5.7	55
136	Mesh partitioning for implicit computations via iterative domain decomposition: Impact and optimization of the subdomain aspect ratio. <i>International Journal for Numerical Methods in Engineering</i> , 1995 , 38, 989-1000	2.4	55
135	A Scalable Substructuring Method by Lagrange Multipliers for Plate Bending Problems. <i>SIAM Journal on Numerical Analysis</i> , 1999 , 36, 1370-1391	2.4	54
134	Solution of finite element systems on concurrent processing computers. <i>Engineering With Computers</i> , 1987 , 2, 157-165	4.5	51
133	TOP/DOMDECA software tool for mesh partitioning and parallel processing. <i>Computing Systems in Engineering: an International Journal</i> , 1995 , 6, 13-26		48
132	FIVER: A finite volume method based on exact two-phase Riemann problems and sparse grids for multi-material flows with large density jumps. <i>Journal of Computational Physics</i> , 2012 , 231, 6360-6379	4.1	47
131	A unified framework for accelerating the convergence of iterative substructuring methods with Lagrange multipliers. <i>International Journal for Numerical Methods in Engineering</i> , 1998 , 42, 257-288	2.4	47
130	Three-dimensional finite element calculations in acoustic scattering using arbitrarily shaped convex artificial boundaries. <i>International Journal for Numerical Methods in Engineering</i> , 2002 , 53, 1461-1476	2.4	47
129	On the solution of three-dimensional inverse obstacle acoustic scattering problems by a regularized Newton method. <i>Inverse Problems</i> , 2002 , 18, 1229-1246	2.3	46
128	Review and assessment of interpolatory model order reduction methods for frequency response structural dynamics and acoustics problems. <i>International Journal for Numerical Methods in Engineering</i> , 2012 , 90, 1636-1662	2.4	45
127	Theoretical comparison of the FETI and algebraically partitioned FETI methods, and performance comparisons with a direct sparse solver. <i>International Journal for Numerical Methods in Engineering</i> , 1999 , 46, 501-533	2.4	45
126	An ALE formulation of embedded boundary methods for tracking boundary layers in turbulent fluid-structure interaction problems. <i>Journal of Computational Physics</i> , 2014 , 263, 53-70	4.1	43

125	Computational algorithms for tracking dynamic fluid-structure interfaces in embedded boundary methods. <i>International Journal for Numerical Methods in Fluids</i> , 2012 , 70, 515-535	1.9	41
124	A discontinuous enrichment method for capturing evanescent waves in multiscale fluid and fluid/solid problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008 , 197, 1680-1698	5.7	41
123	A numerically scalable dual-primal substructuring method for the solution of contact problems—Part I: the frictionless case. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2004 , 193, 2403-2426	5.7	41
122	Simulation of compressible viscous flows on a variety of MPPs: computational algorithms for unstructured dynamic meshes and performance results. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1994 , 119, 35-60	5.7	39
121	Two-dimensional viscous flow computations on the Connecticut Machine: Unstructured meshes, upwind schemes and massively parallel computations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1993 , 102, 61-88	5.7	39
120	A FETI-preconditioned conjugate gradient method for large-scale stochastic finite element problems. <i>International Journal for Numerical Methods in Engineering</i> , 2009 , 80, 914-931	2.4	38
119	Incorporation of linear multipoint constraints in substructure based iterative solvers. Part 1: a numerically scalable algorithm. <i>International Journal for Numerical Methods in Engineering</i> , 1998 , 43, 997-1016	2.4	38
118	The discontinuous enrichment method for elastic wave propagation in the medium-frequency regime. <i>International Journal for Numerical Methods in Engineering</i> , 2006 , 66, 2086-2114	2.4	38
117	A dynamic variational multiscale method for large eddy simulations on unstructured meshes. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006 , 195, 1667-1691	5.7	38
116	A space-time discontinuous Galerkin method for the solution of the wave equation in the time domain. <i>International Journal for Numerical Methods in Engineering</i> , 2009 , 78, 275-295	2.4	37
115	Salinas: A Scalable Software for High-Performance Structural and Solid Mechanics Simulations 2002 ,		37
114	Fast frequency sweep computations using a multi-point Padé-based reconstruction method and an efficient iterative solver. <i>International Journal for Numerical Methods in Engineering</i> , 2007 , 69, 2848-2875	2.4	35
113	A discontinuous Galerkin method with plane waves and Lagrange multipliers for the solution of short wave exterior Helmholtz problems on unstructured meshes. <i>Wave Motion</i> , 2004 , 39, 307-317	1.8	35
112	A computational framework for the simulation of high-speed multi-material fluid-structure interaction problems with dynamic fracture. <i>International Journal for Numerical Methods in Engineering</i> , 2015 , 104, 585-623	2.4	34
111	Modeling of Fuel Sloshing and its Physical Effects on Flutter. <i>AIAA Journal</i> , 2013 , 51, 2252-2265	2.1	34
110	Overview of the discontinuous enrichment method, the ultra-weak variational formulation, and the partition of unity method for acoustic scattering in the medium frequency regime and performance comparisons. <i>International Journal for Numerical Methods in Engineering</i> , 2012 , 89, 403-417	2.4	33
109	A domain decomposition method for discontinuous Galerkin discretizations of Helmholtz problems with plane waves and Lagrange multipliers. <i>International Journal for Numerical Methods in Engineering</i> , 2009 , 78, 1513-1531	2.4	33
108	The FETI family of domain decomposition methods for inequality-constrained quadratic programming: Application to contact problems with conforming and nonconforming interfaces. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2009 , 198, 1673-1683	5.7	33

107	Transient finite element computations on 65536 processors: The connection machine. <i>International Journal for Numerical Methods in Engineering</i> , 1990 , 30, 27-55	2.4	33
106	Strain and stress computations in stochastic finite element methods. <i>International Journal for Numerical Methods in Engineering</i> , 2008 , 74, 1219-1239	2.4	32
105	Learning constitutive relations from indirect observations using deep neural networks. <i>Journal of Computational Physics</i> , 2020 , 416, 109491	4.1	30
104	A systematic approach for constructing higher-order immersed boundary and ghost fluid methods for fluid-structure interaction problems. <i>Journal of Computational Physics</i> , 2012 , 231, 2892-2923	4.1	30
103	Implicit time integration of a class of constrained hybrid formulations Part I: Spectral stability theory. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1995 , 125, 71-107	5.7	30
102	Unusual stabilized finite element methods and residual free bubbles. <i>International Journal for Numerical Methods in Fluids</i> , 1998 , 27, 159-168	1.9	29
101	A minimum overlap restricted additive Schwarz preconditioner and applications in 3D flow simulations. <i>Contemporary Mathematics</i> , 1998 , 479-485	1.6	29
100	On-Demand CFD-Based Aeroelastic Predictions Using a Database of Reduced-Order Bases and Models 2009 ,		27
99	Convergence Analysis of a Discontinuous Galerkin Method with Plane Waves and Lagrange Multipliers for the Solution of Helmholtz Problems. <i>SIAM Journal on Numerical Analysis</i> , 2009 , 47, 1038-1066	2.4	27
98	A FETI-DP method for the parallel iterative solution of indefinite and complex-valued solid and shell vibration problems. <i>International Journal for Numerical Methods in Engineering</i> , 2005 , 63, 398-427	2.4	27
97	A Fast Method for Solving Acoustic Scattering Problems in Frequency Bands. <i>Journal of Computational Physics</i> , 2001 , 168, 412-432	4.1	27
96	A multilevel projection-based model order reduction framework for nonlinear dynamic multiscale problems in structural and solid mechanics. <i>International Journal for Numerical Methods in Engineering</i> , 2017 , 112, 855-881	2.4	26
95	Accelerated mesh sampling for the hyper reduction of nonlinear computational models. <i>International Journal for Numerical Methods in Engineering</i> , 2017 , 109, 1623-1654	2.4	26
94	An adaptive scheme for a class of interpolatory model reduction methods for frequency response problems. <i>International Journal for Numerical Methods in Engineering</i> , 2013 , 93, 1109-1124	2.4	26
93	A discontinuous enrichment method for the finite element solution of high Péclet advection-diffusion problems. <i>Finite Elements in Analysis and Design</i> , 2009 , 45, 238-250	2.2	26
92	FINITE ELEMENT SOLUTION OF TWO-DIMENSIONAL ACOUSTIC SCATTERING PROBLEMS USING ARBITRARILY SHAPED CONVEX ARTIFICIAL BOUNDARIES. <i>Journal of Computational Acoustics</i> , 2000 , 08, 81-99		26
91	Geometric conservation laws for aeroelastic computations using unstructured dynamic meshes 1995 ,		25
90	A discontinuous enrichment method for variable-coefficient advection-diffusion at high Péclet number. <i>International Journal for Numerical Methods in Engineering</i> , 2011 , 87, 309-335	2.4	24

89	A modular multibody analysis capability for high-precision, active control and real-time applications. <i>International Journal for Numerical Methods in Engineering</i> , 1991 , 32, 1767-1798	2.4	24
88	Projection-based model reduction for contact problems. <i>International Journal for Numerical Methods in Engineering</i> , 2016 , 106, 644-663	2.4	24
87	Iterative solution of large-scale acoustic scattering problems with multiple right hand-sides by a domain decomposition method with Lagrange multipliers. <i>International Journal for Numerical Methods in Engineering</i> , 2001 , 51, 1175-1193	2.4	23
86	The discontinuous enrichment method for medium-frequency Helmholtz problems with a spatially variable wavenumber. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014 , 268, 126-140	5.7	22
85	Stability analysis of dynamic meshes for transient aeroelastic computations 1993 ,		22
84	An enhanced FIVER method for multi-material flow problems with second-order convergence rate. <i>Journal of Computational Physics</i> , 2017 , 329, 141-172	4.1	21
83	A higher-order discontinuous enrichment method for the solution of high plet advection-diffusion problems on unstructured meshes. <i>International Journal for Numerical Methods in Engineering</i> , 2010 , 81, 604-636	2.4	21
82	A discontinuous enrichment method for three-dimensional multiscale harmonic wave propagation problems in multi-fluid and fluid-solid media. <i>International Journal for Numerical Methods in Engineering</i> , 2008 , 76, 400-425	2.4	21
81	An iterative domain decomposition method for the solution of a class of indefinite problems in computational structural dynamics. <i>Applied Numerical Mathematics</i> , 2005 , 54, 150-166	2.5	21
80	Multidisciplinary Simulation of the Maneuvering of an Aircraft. <i>Engineering With Computers</i> , 2001 , 17, 16-27	4.5	21
79	A time-parallel implicit method for accelerating the solution of non-linear structural dynamics problems. <i>International Journal for Numerical Methods in Engineering</i> , 2009 , 77, 451-470	2.4	20
78	Shape Optimization Methodology for Reducing the Sonic Boom Initial Pressure Rise. <i>AIAA Journal</i> , 2007 , 45, 1007-1018	2.1	20
77	Parallel/vector improvements of the frontal method. <i>International Journal for Numerical Methods in Engineering</i> , 1991 , 32, 1267-1281	2.4	20
76	Compressed Sensing and Time-Parallel Reduced-Order Modeling for Structural Health Monitoring Using a DDDAS. <i>Lecture Notes in Computer Science</i> , 2007 , 1171-1179	0.9	20
75	A nonparametric probabilistic approach for quantifying uncertainties in low-dimensional and high-dimensional nonlinear models. <i>International Journal for Numerical Methods in Engineering</i> , 2017 , 109, 837-888	2.4	19
74	A family of position- and orientation-independent embedded boundary methods for viscous flow and fluid-structure interaction problems. <i>Journal of Computational Physics</i> , 2018 , 365, 74-104	4.1	19
73	On the stability of projection-based model order reduction for convection-dominated laminar and turbulent flows. <i>Journal of Computational Physics</i> , 2020 , 419, 109681	4.1	18
72	A fictitious domain decomposition method for the solution of partially axisymmetric acoustic scattering problems. Part I: Dirichlet boundary conditions. <i>International Journal for Numerical Methods in Engineering</i> , 2002 , 54, 1309-1332	2.4	18

71	Real-time solution of linear computational problems using databases of parametric reduced-order models with arbitrary underlying meshes. <i>Journal of Computational Physics</i> , 2016 , 326, 373-397	4.1	18
70	An embedded boundary framework for compressible turbulent flow and fluid-structure computations on structured and unstructured grids. <i>International Journal for Numerical Methods in Fluids</i> , 2014 , 76, 366-395	1.9	17
69	Nonlinear Model Reduction for CFD Problems Using Local Reduced-Order Bases 2012 ,		17
68	On the implicit time integration of semi-discrete viscous fluxes on unstructured dynamic meshes. <i>International Journal for Numerical Methods in Fluids</i> , 1999 , 29, 975-996	1.9	17
67	Tailoring domain decomposition methods for efficient parallel coarse grid solution and for systems with many right-hand sides. <i>Contemporary Mathematics</i> , 1994 , 401-406	1.6	17
66	Mesh adaptation framework for embedded boundary methods for computational fluid dynamics and fluid-structure interaction. <i>International Journal for Numerical Methods in Fluids</i> , 2019 , 90, 389-424	1.9	16
65	The GNAT nonlinear model reduction method and its application to fluid dynamics problems 2011 ,		16
64	A multilevel FETI-DP method and its performance for problems with billions of degrees of freedom. <i>International Journal for Numerical Methods in Engineering</i> , 2018 , 116, 661-682	2.4	15
63	A coarse/fine preconditioner for very ill-conditioned finite element problems. <i>International Journal for Numerical Methods in Engineering</i> , 1989 , 28, 1715-1723	2.4	15
62	Gradient-based constrained optimization using a database of linear reduced-order models. <i>Journal of Computational Physics</i> , 2020 , 423, 109787	4.1	15
61	Modeling and Quantification of Model-Form Uncertainties in Eigenvalue Computations Using a Stochastic Reduced Model. <i>AIAA Journal</i> , 2018 , 56, 1198-1210	2.1	14
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