Charbel Farhat

List of Publications by Year
in descending order

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231	19,194	10475	13250
papers	citations	72 h-index	132 g-index

237	237	237	5885
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A method of finite element tearing and interconnecting and its parallel solution algorithm. International Journal for Numerical Methods in Engineering, 1991, 32, 1205-1227.	2.9	1,022
2	Partitioned analysis of coupled mechanical systems. Computer Methods in Applied Mechanics and Engineering, 2001, 190, 3247-3270.	6.7	566
3	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. Computer Methods in Applied Mechanics and Engineering, 1998, 157, 95-114.	6.7	518
4	Interpolation Method for Adapting Reduced-Order Models and Application to Aeroelasticity. AIAA Journal, 2008, 46, 1803-1813.	2.6	514
5	FETI-DP: a dual-primal unified FETI method?part I: A faster alternative to the two-level FETI method. International Journal for Numerical Methods in Engineering, 2001, 50, 1523-1544.	2.9	499
6	Efficient nonâ€linear model reduction via a leastâ€squares Petrovâ€“Galerkin projection and compressive tensor approximations. International Journal for Numerical Methods in Engineering, 2011, 86, 155-181.	2.9	454
7	The GNAT method for nonlinear model reduction: Effective implementation and application to computational fluid dynamics and turbulent flows. Journal of Computational Physics, 2013, 242, 623-647.	3.9	446
8	Torsional springs for two-dimensional dynamic unstructured fluid meshes. Computer Methods in Applied Mechanics and Engineering, 1998, 163, 231-245.	6.7	393
9	Two efficient staggered algorithms for the serial and parallel solution of three-dimensional nonlinear transient aeroelastic problems. Computer Methods in Applied Mechanics and Engineering, 2000, 182, 499-515.	6.7	376
10	Geometric conservation laws for flow problems with moving boundaries and deformable meshes, and their impact on aeroelastic computations. Computer Methods in Applied Mechanics and Engineering, 1996, 134, 71-90.	6.7	315
11	Nonlinear model order reduction based on local reducedâ€order bases. International Journal for Numerical Methods in Engineering, 2012, 92, 891-916.	2.9	315
12	Partitioned procedures for the transient solution of coupled aroelastic problems Part I: Model problem, theory and two-dimensional application. Computer Methods in Applied Mechanics and Engineering, 1995, 124, 79-112.	6.7	310
13	Mixed explicit/implicit time integration of coupled aeroelastic problems: Three-field formulation, geometric conservation and distributed solution. International Journal for Numerical Methods in Fluids, 1995, 21, 807-835.	1.7	308
14	The discontinuous enrichment method. Computer Methods in Applied Mechanics and Engineering, 2001, 190, 6455-6479.	6.7	304
15	Optimal convergence properties of the FETI domain decomposition method. Computer Methods in Applied Mechanics and Engineering, 1994, 115, 365-385.	6.7	295
16	Provably second-order time-accurate loosely-coupled solution algorithms for transient nonlinear computational aeroelasticity. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 1973-2001.	6.7	294
17	The Discrete Geometric Conservation Law and the Nonlinear Stability of ALE Schemes for the Solution of Flow Problems on Moving Grids. Journal of Computational Physics, 2001, 174, 669-694.	3.9	291
18	A simple and efficient automatic fem domain decomposer. Computers and Structures, 1988, 28, 579-602.	4.5	275

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19	A scalable dual-primal domain decomposition method. Numerical Linear Algebra With Applications, 2000, 7, 687-714.	1.7	271
20	Reduced-order fluid/structure modeling of a complete aircraft configuration. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 5730-5742.	6.7	265
21	Multiphysics simulations. International Journal of High Performance Computing Applications, 2013, 27, 4-83.	3.8	263
22	A three-dimensional torsional spring analogy method for unstructured dynamic meshes. Computers and Structures, 2002, 80, 305-316.	4.5	258
23	Partitioned procedures for the transient solution of coupled aeroelastic problems â€“ Part II: energy transfer analysis and three-dimensional applications. Computer Methods in Applied Mechanics and Engineering, 2001, 190, 3147-3170.	6.7	249
24	Updating finite element dynamic models using an element-by-element sensitivity methodology. AIAA Journal, 1993, 31, 1702-1711.	2.6	245
25	An Online Method for Interpolating Linear Parametric Reduced-Order Models. SIAM Journal of Scientific Computing, 2011, 33, 2169-2198.	2.8	236
26	Dimensional reduction of nonlinear finite element dynamic models with finite rotations and energyâ€based mesh sampling and weighting for computational efficiency. International Journal for Numerical Methods in Engineering, 2014, 98, 625-662.	2.9	233
27	Application of a three-field nonlinear fluidâ€“structure formulation to the prediction of the aeroelastic parameters of an F-16 fighter. Computers and Fluids, 2003, 32, 3-29.	2.6	203
28	A discontinuous Galerkin method with Lagrange multipliers for the solution of Helmholtz problems in the mid-frequency regime. Computer Methods in Applied Mechanics and Engineering, 2003, 192, 1389-1419.	6.7	201
29	Structureâ€preserving, stability, and accuracy properties of the energyâ€conserving sampling and weighting method for the hyper reduction of nonlinear finite element dynamic models. International Journal for Numerical Methods in Engineering, 2015, 102, 1077-1110.	2.9	189
30	Bubble functions prompt unusual stabilized finite element methods. Computer Methods in Applied Mechanics and Engineering, 1995, 123, 299-308.	6.7	179
31	Automatic partitioning of unstructured meshes for the parallel solution of problems in computational mechanics. International Journal for Numerical Methods in Engineering, 1993, 36, 745-764.	2.9	177
32	Time-decomposed parallel time-integrators: theory and feasibility studies for fluid, structure, and fluid-structure applications. International Journal for Numerical Methods in Engineering, 2003, 58, 1397-1434.	2.9	170
33	A method for interpolating on manifolds structural dynamics reducedâ€order models. International Journal for Numerical Methods in Engineering, 2009, 80, 1241-1258.	2.9	166
34	Aeroelastic Dynamic Analysis of a Full F-16 Configuration for Various Flight Conditions. AIAA Journal, 2003, 41, 363-371.	2.6	165
35	On the significance of the geometric conservation law for flow computations on moving meshes. Computer Methods in Applied Mechanics and Engineering, 2000, 190, 1467-1482.	6.7	164
36	An Unconventional Domain Decomposition Method for an Efficient Parallel Solution of Large-Scale Finite Element Systems. SIAM Journal on Scientific and Statistical Computing, 1992, 13, 379-396.	1.5	159

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37	Second-order time-accurate and geometrically conservative implicit schemes for flow computations on unstructured dynamic meshes. Computer Methods in Applied Mechanics and Engineering, 1999, 170, 103-129.	6.7	151
38	Stabilization of projectionâ€based reducedâ€order models. International Journal for Numerical Methods in Engineering, 2012, 91, 358-377.	2.9	147
39	A variational multiscale method for the large eddy simulation of compressible turbulent flows on unstructured meshesâ€“â€“application to vortex shedding. Computer Methods in Applied Mechanics and Engineering, 2004, 193, 1367-1383.	6.7	140
40	Residual-free bubbles for the Helmholtz equation. International Journal for Numerical Methods in Engineering, 1997, 40, 4003-4009.	2.9	139
41	Adaptation of Aeroelastic Reduced-Order Models and Application to an F-16 Configuration. AIAA Journal, 2007, 45, 1244-1257.	2.6	139
42	Matching fluid and structure meshes for aeroelastic computations: A parallel approach. Computers and Structures, 1995, 54, 779-785.	4.5	138
43	The two-level FETI method for static and dynamic plate problems Part I: An optimal iterative solver for biharmonic systems. Computer Methods in Applied Mechanics and Engineering, 1998, 155, 129-151.	6.7	133
44	The second generation FETI methods and their application to the parallel solution of large-scale linear and geometrically non-linear structural analysis problems. Computer Methods in Applied Mechanics and Engineering, 2000, 184, 333-374.	6.7	130
45	A simple and efficient extension of a class of substructure based preconditioners to heterogeneous structural mechanics problems. International Journal for Numerical Methods in Engineering, 1999, 44, 489-516.	2.9	122
46	Sensitivity analysis and design optimization of three-dimensional non-linear aeroelastic systems by the adjoint method. International Journal for Numerical Methods in Engineering, 2003, 56, 911-933.	2.9	119
47	Design and analysis of ALE schemes with provable second-order time-accuracy for inviscid and viscous flow simulations. Journal of Computational Physics, 2003, 191, 206-227.	3.9	119
48	Towards Real-Time Computational-Fluid-Dynamics-Based Aeroelastic Computations Using a Database of Reduced-Order Information. AIAA Journal, 2010, 48, 2029-2037.	2.6	119
49	Design optimization using hyper-reduced-order models. Structural and Multidisciplinary Optimization, 2015, 51, 919-940.	3.6	116
50	Two-level domain decomposition methods with Lagrange multipliers for the fast iterative solution of acoustic scattering problems. Computer Methods in Applied Mechanics and Engineering, 2000, 184, 213-239.	6.7	109
51	A two-level domain decomposition method for the iterative solution of high frequency exterior Helmholtz problems. Numerische Mathematik, 2000, 85, 283-308.	1.8	109
52	Dynamic implosion of underwater cylindrical shells: Experiments and Computations. International Journal of Solids and Structures, 2013, 50, 2943-2961.	2.7	107
53	Progressive construction of a parametric reducedâ€order model for PDEâ€constrained optimization. International Journal for Numerical Methods in Engineering, 2015, 102, 1111-1135.	2.9	107
54	A scalable Lagrange multiplier based domain decomposition method for time-dependent problems. International Journal for Numerical Methods in Engineering, 1995, 38, 3831-3853.	2.9	106

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55	A higher-order generalized ghost fluid method for the poor for the three-dimensional two-phase flow computation of underwater implosions. Journal of Computational Physics, 2008, 227, 7674-7700.	3.9	103
56	Higher-Order Subiteration-Free Staggered Algorithm for Nonlinear Transient Aeroelastic Problems. AIAA Journal, 1998, 36, 1754-1757.	2.6	98
57	Learning constitutive relations from indirect observations using deep neural networks. Journal of Computational Physics, 2020, 416, 109491.	3.9	98
58	A parallel active column equation solver. Computers and Structures, 1988, 28, 289-304.	4.5	91
59	A numerically scalable domain decomposition method for the solution of frictionless contact problems. International Journal for Numerical Methods in Engineering, 2001, 50, 2643-2666.	2.9	90
60	Robust and provably secondâ€order explicitâ€“explicit and implicitâ€“explicit staggered timeâ€integrators for highly nonâ€linear compressible fluidâ€–structure interaction problems. International Journal for Numerical Methods in Engineering, 2010, 84, 73-107.	2.9	88
61	A new finite element concurrent computer program architecture. International Journal for Numerical Methods in Engineering, 1987, 24, 1771-1792.	2.9	87
62	The two-level FETI method Part II: Extension to shell problems, parallel implementation and performance results. Computer Methods in Applied Mechanics and Engineering, 1998, 155, 153-179.	6.7	87
63	FETI-DPH: A DUAL-PRIMAL DOMAIN DECOMPOSITION METHOD FOR ACOUSTIC SCATTERING. Journal of Computational Acoustics, 2005, 13, 499-524.	1.0	85
64	Application of the FETI method to ASCI problems?scalability results on 1000 processors and discussion of highly heterogeneous problems. International Journal for Numerical Methods in Engineering, 2000, 47, 513-535.	2.9	84
65	Design and analysis of robust ALE time-integrators for the solution of unsteady flow problems on moving grids. Computer Methods in Applied Mechanics and Engineering, 2004, 193, 4073-4095.	6.7	84
66	Algorithms for interface treatment and load computation in embedded boundary methods for fluid and fluidâ€–structure interaction problems. International Journal for Numerical Methods in Fluids, 2011, 67, 1175-1206.	1.7	84
67	A transient FETI methodology for large-scale parallel implicit computations in structural mechanics. International Journal for Numerical Methods in Engineering, 1994, 37, 1945-1975.	2.9	83
68	A lowâ€cost, goalâ€oriented â€˜compact proper orthogonal decompositionâ€™ basis for model reduction of static systems. International Journal for Numerical Methods in Engineering, 2011, 86, 381-402.	2.9	80
69	A mechanicsâ€informed artificial neural network approach in dataâ€driven constitutive modeling. International Journal for Numerical Methods in Engineering, 2022, 123, 2738-2759.	2.9	80
70	An unconditionally stable staggered algorithm for transient finite element analysis of coupled thermoelastic problems. Computer Methods in Applied Mechanics and Engineering, 1991, 85, 349-365.	6.7	79
71	Extending substructure based iterative solvers to multiple load and repeated analyses. Computer Methods in Applied Mechanics and Engineering, 1994, 117, 195-209.	6.7	79
72	On the general solution by a direct method of a large-scale singular system of linear equations: application to the analysis of floating structures. International Journal for Numerical Methods in Engineering, 1998, 41, 675-696.	2.9	77

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73	On a component mode synthesis method and its application to incompatible substructures. Computers and Structures, 1994, 51, 459-473.	4.5	75
74	The discontinuous enrichment method for multiscale analysis. Computer Methods in Applied Mechanics and Engineering, 2003, 192, 3195-3209.	6.7	74
75	FIVER: A finite volume method based on exact two-phase Riemann problems and sparse grids for multi-material flows with large density jumps. Journal of Computational Physics, 2012, 231, 6360-6379.	3.9	71
76	TOP/DOMDECâ€"A software tool for mesh partitioning and parallel processing. Computing Systems in Engineering: an International Journal, 1995, 6, 13-26.	0.5	70
77	Three-dimensional discontinuous Galerkin elements with plane waves and Lagrange multipliers for the solution of mid-frequency Helmholtz problems. International Journal for Numerical Methods in Engineering, 2006, 66, 796-815.	2.9	70
78	On the stability of projection-based model order reduction for convection-dominated laminar and turbulent flows. Journal of Computational Physics, 2020, 419, 109681.	3.9	70
79	A general approach to nonlinear FE computations on shared-memory multiprocessors. Computer Methods in Applied Mechanics and Engineering, 1989, 72, 153-171.	6.7	69
80	Time-parallel implicit integrators for the near-real-time prediction of linear structural dynamic responses. International Journal for Numerical Methods in Engineering, 2006, 67, 697-724.	2.9	68
81	A linearized method for the frequency analysis of three-dimensional fluid/structure interaction problems in all flow regimes. Computer Methods in Applied Mechanics and Engineering, 2001, 190, 3121-3146.	6.7	67
82	A lagrange multiplier based divide and conquer finite element algorithm. Computing Systems in Engineering: an International Journal, 1991, 2, 149-156.	0.5	66
83	Mesh partitioning for implicit computations via iterative domain decomposition: Impact and optimization of the subdomain aspect ratio. International Journal for Numerical Methods in Engineering, 1995, 38, 989-1000.	2.9	66
84	Review and assessment of interpolatory model order reduction methods for frequency response structural dynamics and acoustics problems. International Journal for Numerical Methods in Engineering, 2012, 90, 1636-1662.	2.9	65
85	Higher-order extensions of a discontinuous Galerkin method for mid-frequency Helmholtz problems. International Journal for Numerical Methods in Engineering, 2004, 61, 1938-1956.	2.9	60
86	A Scalable Substructuring Method by Lagrange Multipliers for Plate Bending Problems. SIAM Journal on Numerical Analysis, 1999, 36, 1370-1391.	2.3	58
87	An ALE formulation of embedded boundary methods for tracking boundary layers in turbulent fluidâ€"structure interaction problems. Journal of Computational Physics, 2014, 263, 53-70.	3.9	57
88	A unified framework for accelerating the convergence of iterative substructuring methods with Lagrange multipliers. International Journal for Numerical Methods in Engineering, 1998, 42, 257-288.	2.9	55
89	Three-dimensional finite element calculations in acoustic scattering using arbitrarily shaped convex artificial boundaries. International Journal for Numerical Methods in Engineering, 2002, 53, 1461-1476.	2.9	55
90	Computational algorithms for tracking dynamic fluidâ€"structure interfaces in embedded boundary methods. International Journal for Numerical Methods in Fluids, 2012, 70, 515-535.	1.7	55

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91	A computational framework for the simulation of highâ€speed multiâ€material fluidâ€“structure interaction problems with dynamic fracture. International Journal for Numerical Methods in Engineering, 2015, 104, 585-623.	2.9	55
92	Theoretical comparison of the FETI and algebraically partitioned FETI methods, and performance comparisons with a direct sparse solver. International Journal for Numerical Methods in Engineering, 1999, 46, 501-533.	2.9	54
93	Solution of finite element systems on concurrent processing computers. Engineering With Computers, 1987, 2, 157-165.	5.8	53
94	On the solution of three-dimensional inverse obstacle acoustic scattering problems by a regularized Newton method. Inverse Problems, 2002, 18, 1229-1246.	1.9	52
95	Accelerated mesh sampling for the hyper reduction of nonlinear computational models. International Journal for Numerical Methods in Engineering, 2017, 109, 1623-1654.	2.9	52
96	Gradient-based constrained optimization using a database of linear reduced-order models. Journal of Computational Physics, 2020, 423, 109787.	3.9	50
97	Two-dimensional viscous flow computations on the Connecti on Machine: Unstructured meshes, upwind schemes and massively parallel computations. Computer Methods in Applied Mechanics and Engineering, 1993, 102, 61-88.	6.7	47
98	Modeling of Fuel Sloshing and its Physical Effects on Flutter. AIAA Journal, 2013, 51, 2252-2265.	2.6	47
99	A modular multibody analysis capability for high-precision, active control and real-time applications. International Journal for Numerical Methods in Engineering, 1991, 32, 1767-1798.	2.9	46
100	A spaceâ€“time discontinuous Galerkin method for the solution of the wave equation in the time domain. International Journal for Numerical Methods in Engineering, 2009, 78, 275-295.	2.9	45
101	Salinas: A Scalable Software for High-Performance Structural and Solid Mechanics Simulations. , 2002, , .		44
102	A numerically scalable dual-primal substructuring method for the solution of contact problemsâ€“â€“part I: the frictionless case. Computer Methods in Applied Mechanics and Engineering, 2004, 193, 2403-2426.	6.7	44
103	A discontinuous enrichment method for capturing evanescent waves in multiscale fluid and fluid/solid problems. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 1680-1698.	6.7	44
104	A multilevel projectionâ€based model order reduction framework for nonlinear dynamic multiscale problems in structural and solid mechanics. International Journal for Numerical Methods in Engineering, 2017, 112, 855-881.	2.9	44
105	A dynamic variational multiscale method for large eddy simulations on unstructured meshes. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 1667-1691.	6.7	42
106	Simulation of compressible viscous flows on a variety of MPPs: computational algorithms for unstructured dynamic meshes and performance results. Computer Methods in Applied Mechanics and Engineering, 1994, 119, 35-60.	6.7	41
107	Incorporation of linear multipoint constraints in substructure based iterative solvers. Part 1: a numerically scalable algorithm. International Journal for Numerical Methods in Engineering, 1998, 43, 997-1016.	2.9	41
108	The discontinuous enrichment method for elastic wave propagation in the medium-frequency regime. International Journal for Numerical Methods in Engineering, 2006, 66, 2086-2114.	2.9	41

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109	A FETIâ€preconditioned conjugate gradient method for largeâ€scale stochastic finite element problems. International Journal for Numerical Methods in Engineering, 2009, 80, 914-931.	2.9	41
110	A discontinuous Galerkin method with plane waves and Lagrange multipliers for the solution of short wave exterior Helmholtz problems on unstructured meshes. Wave Motion, 2004, 39, 307-317.	2.1	39
111	Fast frequency sweep computations using a multi-point PadÃ©-based reconstruction method and an efficient iterative solver. International Journal for Numerical Methods in Engineering, 2007, 69, 2848-2875.	2.9	39
112	Quadratic approximation manifold for mitigating the Kolmogorov barrier in nonlinear projection-based model order reduction. Journal of Computational Physics, 2022, 464, 111348.	3.9	39
113	Implicit time integration of a class of constrained hybrid formulationsâ€”Part I: Spectral stability theory. Computer Methods in Applied Mechanics and Engineering, 1995, 125, 71-107.	6.7	38
114	The FETI family of domain decomposition methods for inequality-constrained quadratic programming: Application to contact problems with conforming and nonconforming interfaces. Computer Methods in Applied Mechanics and Engineering, 2009, 198, 1673-1683.	6.7	38
115	A systematic approach for constructing higher-order immersed boundary and ghost fluid methods for fluidâ€“structure interaction problems. Journal of Computational Physics, 2012, 231, 2892-2923.	3.9	38
116	A nonparametric probabilistic approach for quantifying uncertainties in lowâ€dimensional and highâ€dimensional nonlinear models. International Journal for Numerical Methods in Engineering, 2017, 109, 837-888.	2.9	38
117	Projectionâ€based model reduction for contact problems. International Journal for Numerical Methods in Engineering, 2016, 106, 644-663.	2.9	37
118	A domain decomposition method for discontinuous Galerkin discretizations of Helmholtz problems with plane waves and Lagrange multipliers. International Journal for Numerical Methods in Engineering, 2009, 78, 1513-1531.	2.9	36
119	Transient finite element computations on 65536 processors: The connection machine. International Journal for Numerical Methods in Engineering, 1990, 30, 27-55.	2.9	34
120	Strain and stress computations in stochastic finite element methods. International Journal for Numerical Methods in Engineering, 2008, 74, 1219-1239.	2.9	34
121	Unusual stabilized finite element methods and residual free bubbles. International Journal for Numerical Methods in Fluids, 1998, 27, 159-168.	1.7	33
122	On-Demand CFD-Based Aeroelastic Predictions Using a Database of Reduced-Order Bases and Models. , 2009, , .		33
123	Overview of the discontinuous enrichment method, the ultraâ€weak variational formulation, and the partition of unity method for acoustic scattering in the medium frequency regime and performance comparisons. International Journal for Numerical Methods in Engineering, 2012, 89, 403-417.	2.9	33
124	Mesh adaptation framework for embedded boundary methods for computational fluid dynamics and fluidâ€structure interaction. International Journal for Numerical Methods in Fluids, 2019, 90, 389-424.	1.7	33
125	Geometric conservation laws for aeroelastic computations using unstructured dynamic meshes. , 1995, , .		32
126	An adaptive scheme for a class of interpolatory model reduction methods for frequency response problems. International Journal for Numerical Methods in Engineering, 2013, 93, 1109-1124.	2.9	32

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127	A FETI-DP method for the parallel iterative solution of indefinite and complex-valued solid and shell vibration problems. International Journal for Numerical Methods in Engineering, 2005, 63, 398-427.	2.9	31
128	Convergence Analysis of a Discontinuous Galerkin Method with Plane Waves and Lagrange Multipliers for the Solution of Helmholtz Problems. SIAM Journal on Numerical Analysis, 2009, 47, 1038-1066.	2.3	31
129	An enhanced FIVER method for multi-material flow problems with second-order convergence rate. Journal of Computational Physics, 2017, 329, 141-172.	3.9	31
130	Mesh sampling and weighting for the hyperreduction of nonlinear Petrovâ€“Galerkin reducedâ€order models with local reducedâ€order bases. International Journal for Numerical Methods in Engineering, 2021, 122, 1846-1874.	2.9	31
131	A discontinuous enrichment method for the finite element solution of high PÃ©clet advectionâ€“diffusion problems. Finite Elements in Analysis and Design, 2009, 45, 238-250.	3.2	30
132	FINITE ELEMENT SOLUTION OF TWO-DIMENSIONAL ACOUSTIC SCATTERING PROBLEMS USING ARBITRARILY SHAPED CONVEX ARTIFICIAL BOUNDARIES. Journal of Computational Acoustics, 2000, 08, 81-99.	1.0	29
133	A Fast Method for Solving Acoustic Scattering Problems in Frequency Bands. Journal of Computational Physics, 2001, 168, 412-432.	3.9	29
134	Shape Optimization Methodology for Reducing the Sonic Boom Initial Pressure Rise. AIAA Journal, 2007, 45, 1007-1018.	2.6	28
135	A timeâ€parallel implicit method for accelerating the solution of nonâ€linear structural dynamics problems. International Journal for Numerical Methods in Engineering, 2009, 77, 451-470.	2.9	27
136	An embedded boundary framework for compressible turbulent flow and fluidâ€“structure computations on structured and unstructured grids. International Journal for Numerical Methods in Fluids, 2014, 76, 366-395.	1.7	27
137	A family of position- and orientation-independent embedded boundary methods for viscous flow and fluidâ€“structure interaction problems. Journal of Computational Physics, 2018, 365, 74-104.	3.9	27
138	A multilevel FETIâ€DP method and its performance for problems with billions of degrees of freedom. International Journal for Numerical Methods in Engineering, 2018, 116, 661-682.	2.9	27
139	Nonlinear Model Reduction for CFD Problems Using Local Reduced-Order Bases. , 2012, , .		26
140	Iterative solution of largeâ€scale acoustic scattering problems with multiple right handâ€sides by a domain decomposition method with Lagrange multipliers. International Journal for Numerical Methods in Engineering, 2001, 51, 1175-1193.	2.9	25
141	A discontinuous enrichment method for variableâ€coefficient advectionâ€“diffusion at high PÃ©clet number. International Journal for Numerical Methods in Engineering, 2011, 87, 309-335.	2.9	25
142	Reduction of nonlinear embedded boundary models for problems with evolving interfaces. Journal of Computational Physics, 2014, 274, 489-504.	3.9	25
143	Real-time solution of linear computational problems using databases of parametric reduced-order models with arbitrary underlying meshes. Journal of Computational Physics, 2016, 326, 373-397.	3.9	25
144	On the Use of Discrete Nonlinear Reduced-Order Models for the Prediction of Steady-State Flows Past Parametrically Deformed Complex Geometries. , 2016, , .		25

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145	Simulation of Parachute Inflation Dynamics Using an Eulerian Computational Framework for Fluid-Structure Interfaces Evolving in High-Speed Turbulent Flows. , 2018, , .		25
146	Compressed Sensing and Time-Parallel Reduced-Order Modeling for Structural Health Monitoring Using a DDDAS. Lecture Notes in Computer Science, 2007, , 1171-1179.	1.0	25
147	Stability analysis of dynamic meshes for transient aeroelastic computations. , 1993, , .		24
148	An iterative domain decomposition method for the solution of a class of indefinite problems in computational structural dynamics. Applied Numerical Mathematics, 2005, 54, 150-166.	2.2	24
149	A discontinuous enrichment method for threeâ€dimensional multiscale harmonic wave propagation problems in multiâ€fluid and fluidâ€“solid media. International Journal for Numerical Methods in Engineering, 2008, 76, 400-425.	2.9	24
150	The discontinuous enrichment method for medium-frequency Helmholtz problems with a spatially variable wavenumber. Computer Methods in Applied Mechanics and Engineering, 2014, 268, 126-140.	6.7	24
151	Feasible Probabilistic Learning Method for Model-Form Uncertainty Quantification in Vibration Analysis. AIAA Journal, 2019, 57, 4978-4991.	2.6	24
152	Multidisciplinary Simulation of the Maneuvering of an Aircraft. Engineering With Computers, 2001, 17, 16-27.	5.8	23
153	A higherâ€order discontinuous enrichment method for the solution of high pÃ©clet advectionâ€“diffusion problems on unstructured meshes. International Journal for Numerical Methods in Engineering, 2010, 81, 604-636.	2.9	22
154	Probabilistic learning for modeling and quantifying modelâ€form uncertainties in nonlinear computational mechanics. International Journal for Numerical Methods in Engineering, 2019, 117, 819-843.	2.9	22
155	Parallel/vector improvements of the frontal method. International Journal for Numerical Methods in Engineering, 1991, 32, 1267-1281.	2.9	21
156	Modeling and Quantification of Model-Form Uncertainties in Eigenvalue Computations Using a Stochastic Reduced Model. AIAA Journal, 2018, 56, 1198-1210.	2.6	21
157	A computationally tractable framework for nonlinear dynamic multiscale modeling of membrane woven fabrics. International Journal for Numerical Methods in Engineering, 2021, 122, 2598-2625.	2.9	21
158	CFD on moving grids: from theory to realistic flutter, maneuvering, and multidisciplinary optimization. International Journal of Computational Fluid Dynamics, 2005, 19, 595-603.	1.3	20
159	A second-order time-accurate implicit finite volume method with exact two-phase Riemann problems for compressible multi-phase fluid and fluidâ€“structure problems. Journal of Computational Physics, 2014, 258, 613-633.	3.9	20
160	On the implicit time integration of semi-discrete viscous fluxes on unstructured dynamic meshes. International Journal for Numerical Methods in Fluids, 1999, 29, 975-996.	1.7	19
161	A fictitious domain decomposition method for the solution of partially axisymmetric acoustic scattering problems. Part I: Dirichlet boundary conditions. International Journal for Numerical Methods in Engineering, 2002, 54, 1309-1332.	2.9	19
162	The GNAT nonlinear model reduction method and its application to fluid dynamics problems. , 2011, , .		18

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163	Active Manifold and Model-Order Reduction to Accelerate Multidisciplinary Analysis and Optimization. AIAA Journal, 2021, 59, 4739-4753.	2.6	18
164	A coarse/fine preconditioner for very ill-conditioned finite element problems. International Journal for Numerical Methods in Engineering, 1989, 28, 1715-1723.	2.9	17
165	Modeling, Simulation and Validation of Supersonic Parachute Inflation Dynamics during Mars Landing. , 2020, , .		16
166	CFD-Based Aeroelastic Eigensolver for the Subsonic, Transonic, and Supersonic Regimes. Journal of Aircraft, 2001, 38, 628-635.	2.3	15
167	Incorporation of linear multipoint constraints in domain-decomposition-based iterative solvers â€“ Part II: Blending FETI-DP and mortar methods and assembling floating substructures. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 1347-1368.	6.7	15
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