Yijun Liu

List of Publications by Year
in descending order

104 papers	4,642 citations	101496 36 h-index	110317 64 g-index
109 all docs	109 docs citations	109 times ranked	2496 citing authors

#	ARTICLE	IF	CITATIONS
1	Evaluations of the effective material properties of carbon nanotube-based composites using a nanoscale representative volume element. Mechanics of Materials, 2003, 35, 69-81.	1.7	392
2	Revolutionizing biodegradable metals. Materials Today, 2009, 12, 22-32.	8.3	331
3	Square representative volume elements for evaluating the effective material properties of carbon nanotube-based composites. Computational Materials Science, 2004, 29, 1-11.	1.4	248
4	The fast multipole boundary element method for potential problems: A tutorial. Engineering Analysis With Boundary Elements, 2006, 30, 371-381.	2.0	172
5	Analysis of shell-like structures by the Boundary Element Method based on 3-D elasticity: formulation and verification. International Journal for Numerical Methods in Engineering, 1998, 41, 541-558.	1.5	145
6	A weakly singular form of the hypersingular boundary integral equation applied to 3-D acoustic wave problems. Computer Methods in Applied Mechanics and Engineering, 1992, 96, 271-287.	3.4	131
7	An adaptive fast multipole boundary element method for three-dimensional acoustic wave problems based on the Burtonâ€"Miller formulation. Computational Mechanics, 2007, 40, 461-472.	2.2	127
8	A study on the tensile response and fracture in carbon nanotube-based composites using molecular mechanics. Composites Science and Technology, 2007, 67, 530-540.	3.8	126
9	Recent Advances and Emerging Applications of the Boundary Element Method. Applied Mechanics Reviews, 2011, 64, .	4.5	121
10	A Fast Boundary Element Method for the Analysis of Fiber-Reinforced Composites Based on a Rigid-Inclusion Model. Journal of Applied Mechanics, Transactions ASME, 2005, 72, 115-128.	1.1	115
11	Some identities for fundamental solutions and their applications to weakly-singular boundary element formulations. Engineering Analysis With Boundary Elements, 1991, 8, 301-311.	2.0	110
12	Analysis of two-dimensional thin structures (from micro- to nano-scales) using the boundary element method. Computational Mechanics, 1998, 22, 404-412.	2.2	106
13	Large-scale modeling of carbon-nanotube composites by a fast multipole boundary element method. Computational Materials Science, 2005, 34, 173-187.	1.4	100
14	Plasma deposition of Ultrathin polymer films on carbon nanotubes. Applied Physics Letters, 2002, 81, 5216-5218.	1.5	99
15	Boundary integral equations for thin bodies. International Journal for Numerical Methods in Engineering, 1994, 37, 107-121.	1.5	86
16	Modeling of Interphases in Fiber-Reinforced Composites Under Transverse Loading Using the Boundary Element Method. Journal of Applied Mechanics, Transactions ASME, 2000, 67, 41-49.	1.1	86
17	A new boundary meshfree method with distributed sources. Engineering Analysis With Boundary Elements, 2010, 34, 914-919.	2.0	78
18	New identities for fundamental solutions and their applications to non-singular boundary element formulations. Computational Mechanics, 1999, 24, 286-292.	2.2	75

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19	A new fast multipole boundary element method for solving large-scale two-dimensional elastostatic problems. International Journal for Numerical Methods in Engineering, 2006, 65, 863-881.	1.5	70
20	Interfacial stress analysis for multi-coating systems using an advanced boundary element method. Computational Mechanics, 2000, 24, 448-455.	2.2	58
21	An Adaptive Fast Multipole Boundary Element Method for Three-dimensional Potential Problems. Computational Mechanics, 2007, 39, 681-691.	2.2	58
22	Adaptive fast multipole boundary element method for three-dimensional half-space acoustic wave problems. Engineering Analysis With Boundary Elements, 2009, 33, 1113-1123.	2.0	57
23	A fast multipole accelerated method of fundamental solutions for potential problems. Engineering Analysis With Boundary Elements, 2005, 29, 1016-1024.	2.0	56
24	The effect of a convection vortex on sock formation in the floating catalyst method for carbon nanotube synthesis. Carbon, 2016, 102, 513-519.	5.4	56
25	Hypersingular boundary integral equations for radiation and scattering of elastic waves in three dimensions. Computer Methods in Applied Mechanics and Engineering, 1993, 107, 131-144.	3.4	54
26	A new form of the hypersingular boundary integral equation for 3-D acoustics and its implementation with C0 boundary elements. Computer Methods in Applied Mechanics and Engineering, 1999, 173, 375-386.	3.4	54
27	Modeling of interface cracks in fiber-reinforced composites with the presence of interphases using the boundary element method. Mechanics of Materials, 2000, 32, 769-783.	1.7	52
28	On the simple-solution method and non-singular nature of the BIE/BEM â€" a review and some new results. Engineering Analysis With Boundary Elements, 2000, 24, 789-795.	2.0	51
29	Scattering of elastic waves from thin shapes in three dimensions using the composite boundary integral equation formulation. Journal of the Acoustical Society of America, 1997, 102, 926-932.	0.5	45
30	Thermal analysis of carbon-nanotube composites using a rigid-line inclusion model by the boundary integral equation method. Computational Mechanics, 2004, 35, 1-10.	2.2	45
31	On the BEM for acoustic wave problems. Engineering Analysis With Boundary Elements, 2019, 107, 53-62.	2.0	45
32	Multiple-cell modeling of fiber-reinforced composites with the presence of interphases using the boundary element method. Computational Materials Science, 2001, 21, 86-94.	1.4	43
33	Analysis of thin piezoelectric solids by the boundary element method. Computer Methods in Applied Mechanics and Engineering, 2002, 191, 2297-2315.	3.4	43
34	Finite deflection analysis of elastic plate by the boundary element method. Applied Mathematical Modelling, 1985, 9, 183-188.	2.2	39
35	On the conventional boundary integral equation formulation for piezoelectric solids with defects or of thin shapes. Engineering Analysis With Boundary Elements, 2001, 25, 77-91.	2.0	39
36	A boundary element method for the analysis of CNT/polymer composites with a cohesive interface model based on molecular dynamics. Engineering Analysis With Boundary Elements, 2008, 32, 299-308.	2.0	39

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37	An advanced 3D boundary element method for characterizations of composite materials. Engineering Analysis With Boundary Elements, 2005, 29, 513-523.	2.0	38
38	A dual BIE approach for large-scale modelling of 3-D electrostatic problems with the fast multipole boundary element method. International Journal for Numerical Methods in Engineering, 2007, 71, 837-855.	1.5	36
39	A fast multipole boundary element method for 2D multi-domain elastostatic problems based on a dual BIE formulation. Computational Mechanics, 2008, 42, 761-773.	2.2	34
40	A new fast multipole boundary element method for solving 2-D Stokes flow problems based on a dual BIE formulation. Engineering Analysis With Boundary Elements, 2008, 32, 139-151.	2.0	34
41	Modeling of multiple crack propagation in 2-D elastic solids by the fast multipole boundary element method. Engineering Fracture Mechanics, 2017, 172, 1-16.	2.0	34
42	Finite Element Modeling and Simulation with ANSYS Workbench. , 0, , .		34
43	Gas phase pyrolysis synthesis of carbon nanotubes at high temperature. Materials and Design, 2017, 132, 112-118.	3.3	32
44	A unified boundary element method for the analysis of sound and shell-like structure interactions. I. Formulation and verification. Journal of the Acoustical Society of America, 1999, 106, 1247-1254.	0.5	29
45	Regularized integral equations and curvilinear boundary elements for electromagnetic wave scattering in three dimensions. IEEE Transactions on Antennas and Propagation, 1995, 43, 1416-1422.	3.1	28
46	Micromechanism of oxygen transport during initial stage oxidation in Si(100) surface: A ReaxFF molecular dynamics simulation study. Applied Surface Science, 2017, 406, 178-185.	3.1	28
47	A fast multipole boundary element method for 3D multi-domain acoustic scattering problems based on the Burton–Miller formulation. Engineering Analysis With Boundary Elements, 2012, 36, 779-788.	2.0	27
48	An adaptive model order reduction method for boundary element-based multi-frequency acoustic wave problems. Computer Methods in Applied Mechanics and Engineering, 2021, 373, 113532.	3.4	24
49	Analysis of the shear stress transferred from a partially electroded piezoelectric actuator to an elastic substrate. Smart Materials and Structures, 2000, 9, 248-254.	1.8	23
50	A low-frequency fast multipole boundary element method based on analytical integration of the hypersingular integral for 3D acoustic problems. Engineering Analysis With Boundary Elements, 2013, 37, 309-318.	2.0	23
51	Analytical integration of the moments in the diagonal form fast multipole boundary element method for 3-D acoustic wave problems. Engineering Analysis With Boundary Elements, 2012, 36, 248-254.	2.0	22
52	General formulation for light scattering by a dielectric body near a perfectly conducting surface. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1996, 13, 338.	0.8	20
53	THE BOUNDARY ELEMENT METHOD. International Journal of Computational Methods, 2013, 10, 1350037.	0.8	20
54	On the displacement discontinuity method and the boundary element method for solving 3-D crack problems. Engineering Fracture Mechanics, 2016, 164, 35-45.	2.0	20

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55	An Internet-based computing platform for the boundary element method. Advances in Engineering Software, 2003, 34, 261-269.	1.8	18
56	Boundary effect on the elastic field of a semi-infinite solid containing inhomogeneities. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20150174.	1.0	18
57	A fast multipole boundary element method for modeling 2-D multiple crack problems with constant elements. Engineering Analysis With Boundary Elements, 2014, 47, 1-9.	2.0	17
58	A fast multipole boundary element method for 2D viscoelastic problems. Engineering Analysis With Boundary Elements, 2011, 35, 170-178.	2.0	15
59	Efficient solution of multiple cracks in great number using eigen COD boundary integral equations with iteration procedure. Engineering Analysis With Boundary Elements, 2013, 37, 487-500.	2.0	15
60	A fast directional BEM for large-scale acoustic problems based on the Burtonâ€"Miller formulation. Engineering Analysis With Boundary Elements, 2015, 50, 47-58.	2.0	15
61	Equivalent Inclusion Method for the Stokes Flow of Drops Moving in a Viscous Fluid. Journal of Applied Mechanics, Transactions ASME, 2014, 81, .	1.1	14
62	Revisit of the equivalence of the displacement discontinuity method and boundary element method for solving crack problems. Engineering Analysis With Boundary Elements, 2014, 47, 64-67.	2.0	14
63	Fast multipole boundary element analysis of 2D viscoelastic composites with imperfect interfaces. Science China Technological Sciences, 2010, 53, 2160-2171.	2.0	13
64	Analyzing Acoustic Radiation Modes of Baffled Plates With a Fast Multipole Boundary Element Method. Journal of Vibration and Acoustics, Transactions of the ASME, 2013, 135, .	1.0	13
65	Equivalent inclusion method-based simulation of particle sedimentation toward functionally graded material manufacturing. Acta Mechanica, 2014, 225, 1429-1445.	1.1	13
66	ReaxFF molecular dynamics study on oxidation behavior of 3C-SiC: Polar face effects. Chinese Physics B, 2015, 24, 096203.	0.7	13
67	A unified boundary element method for the analysis of sound and shell-like structure interactions. II. Efficient solution techniques. Journal of the Acoustical Society of America, 2000, 108, 2738-2745.	0.5	12
68	Dual BIE approaches for modeling electrostatic MEMS problems with thin beams and accelerated by the fast multipole method. Engineering Analysis With Boundary Elements, 2006, 30, 940-948.	2.0	12
69	A fast multipole boundary element method for solving the thin plate bending problem. Engineering Analysis With Boundary Elements, 2013, 37, 967-976.	2.0	12
70	Stress Concentration of a Microvoid Embedded in an Adhesive Layer during Stress Transfer. Journal of Engineering Mechanics - ASCE, 2014, 140, .	1.6	12
71	A new fast direct solver for the boundary element method. Computational Mechanics, 2017, 60, 379-392.	2.2	12
72	A Fast Multipole Boundary Element Method for Three-Dimensional Half-Space Acoustic Wave Problems Over an Impedance Plane. International Journal of Computational Methods, 2015, 12, 1350090.	0.8	11

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73	A new boundary element method for modeling wave propagation in functionally graded materials. European Journal of Mechanics, A/Solids, 2020, 80, 103897.	2.1	11
74	Efficient multi-frequency solutions of FE–BE coupled structural–acoustic problems using Arnoldi-based dimension reduction approach. Computer Methods in Applied Mechanics and Engineering, 2021, 386, 114126.	3.4	10
75	Determining the defect locations and sizes in elastic plates by using the artificial neural network and boundary element method. Engineering Analysis With Boundary Elements, 2022, 139, 232-245.	2.0	10
76	A coupled ES-BEM and FM-BEM for structural acoustic problems. Noise Control Engineering Journal, 2014, 62, 196-209.	0.2	9
77	A fast multipole boundary element method for solving two-dimensional thermoelasticity problems. Computational Mechanics, 2014, 54, 821-831.	2.2	8
78	Elastic stability analysis of thin plate by the boundary element method—a new formulation. Engineering Analysis, 1987, 4, 160-164.	0.1	7
79	A new simple multidomain fast multipole boundary element method. Computational Mechanics, 2016, 58, 533-548.	2.2	7
80	Boundary formulation and numerical analysis of elastic bodies with surface-bonded piezoelectric films. Smart Materials and Structures, 2002, 11, 308-311.	1.8	6
81	Analysis of 3-D frictional contact mechanics problems by a boundary element method. Tsinghua Science and Technology, 2005, 10, 16-29.	4.1	6
82	Slow convergence of the BEM with constant elements in solving beam bending problems. Engineering Analysis With Boundary Elements, 2014, 39, 1-4.	2.0	6
83	Identities for the fundamental solution of thin plate bending problems and the nonuniqueness of the hypersingular BIE solution for multi-connected domains. Engineering Analysis With Boundary Elements, 2013, 37, 594-602.	2.0	5
84	Multifunctional smart composites with integrated carbon nanotube yarn and sheet. , 2017, , .		5
85	Multiscale Modeling of Carbon Nanotube Bundle Agglomeration inside a Gas Phase Pyrolysis Reactor. MRS Advances, 2017, 2, 2621-2626.	0.5	5
86	Analysis of numerical integration error for Bessel integral identity in fast multipole method for 2D Helmholtz equation. Journal of Shanghai Jiaotong University (Science), 2010, 15, 690-693.	0.5	4
87	New Applications and Techniques for Nanotube Superfiber Development. , 2014, , 33-59.		4
88	Scattering of SH-waves by an interface cavity. Acta Mechanica, 2004, 170, 47.	1.1	3
89	Development of the Fast Multipole Boundary Element Method for Acoustic Wave Problems. , 2009, , 287-303.		3
90	Numerical and Experimental Investigation of Carbon Nanotube Sock Formation. MRS Advances, 2017, 2, 21-26.	0.5	3

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91	Boundary Element Solver for Coupled Conduction-Radiation Heat Transfer in Nonhomogeneous Media. Journal of Thermophysics and Heat Transfer, 2018, 32, 975-983.	0.9	3
92	Diagonal form fast multipole boundary element method for 2D acoustic problems based on Burton-Miller boundary integral equation formulation and its applications. Applied Mathematics and Mechanics (English Edition), 2011, 32, 981-996.	1.9	2
93	On the Identities for Elastostatic Fundamental Solution and Nonuniqueness of the Traction BIE Solution for Multiconnected Domains. Journal of Applied Mechanics, Transactions ASME, 2013, 80, .	1.1	2
94	A dual interpolation Galerkin boundary face method for potential problems. Engineering Analysis With Boundary Elements, 2020, 117, 157-166.	2.0	2
95	Solution of stress intensity factors for 2-D multiple crack problems by the fast multipole boundary element method. , 2013, , .		1
96	Some advances in boundary integral methods for wave-scattering from cracks. , 1992, , 55-65.		1
97	Linkage Between Learning Styles and Design Engineering Perceptions of Undergraduate Students. , 2006, , 307.		0
98	Responsive Biosensors for Biodegradable Magnesium Implants. , 2009, , .		0
99	Recent Development of the Fast Multipole Boundary Element Method for Modeling Acoustic Problems. , 2009, , .		0
100	Fast Multipole Boundary Element Method for 3-D Full- and Half-Space Acoustic Wave Problems. , 2009, , .		0
101	Special issue on the advances in mesh reduction methodsâ€"In honor of Professor Subrata Mukherjee on the occasion of his 65th birthday. Engineering Analysis With Boundary Elements, 2010, 34, 902-903.	2.0	0
102	Multiscale Modeling of CNT Composites using Molecular Dynamics and the Boundary Element Method. , 2014, , 569-594.		0
103	The Boundary Element Method for Piezoelectric Materials. Advances in Mechanics and Mathematics, 2003, , 143-161.	0.2	0
104	Finite Deflection Analysis of Heated Elastic Plates by the Boundary Element Method. , 1986, , 367-374.		0