

Song Cen

List of Publications by Year in descending order

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94
papers

1,627
citations

257101

24
h-index

344852

36
g-index

97
all docs

97
docs citations

97
times ranked

534
citing authors

#	ARTICLE	IF	CITATIONS
1	Membrane elements insensitive to distortion using the quadrilateral area coordinate method. Computers and Structures, 2004, 82, 35-54.	2.4	97
2	8- and 12-node plane hybrid stress-function elements immune to severely distorted mesh containing elements with concave shapes. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 2321-2336.	3.4	79
3	A new twelve DOF quadrilateral element for analysis of thick and thin plates. European Journal of Mechanics, A/Solids, 2001, 20, 299-326.	2.1	71
4	Application of the quadrilateral area co-ordinate method: a new element for Mindlin's Reissner plate. International Journal for Numerical Methods in Engineering, 2006, 66, 1-45.	1.5	70
5	A 4-node hybrid stress-function (HS-F) plane element with drilling degrees of freedom less sensitive to severe mesh distortions. Computers and Structures, 2011, 89, 517-528.	2.4	69
6	Advanced Finite Element Method in Structural Engineering. , 2009, , .		61
7	A new 4-node quadrilateral FE model with variable electrical degrees of freedom for the analysis of piezoelectric laminated composite plates. Composite Structures, 2002, 58, 583-599.	3.1	60
8	Area co-ordinates used in quadrilateral elements. Communications in Numerical Methods in Engineering, 1999, 15, 533-545.	1.3	58
9	Analytical trial function method for development of new 8-node plane element based on the variational principle containing Airy stress function. Engineering Computations, 2010, 27, 442-463.	0.7	58
10	Quadrilateral membrane element family formulated by the quadrilateral area coordinate method. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 4337-4353.	3.4	57
11	A shape-free 8-node plane element unsymmetric analytical trial function method. International Journal for Numerical Methods in Engineering, 2012, 91, 158-185.	1.5	46
12	A new quadrilateral area coordinate method (QACM) for developing quadrilateral finite element models. International Journal for Numerical Methods in Engineering, 2008, 73, 1911-1941.	1.5	43
13	Some basic formulae for area co-ordinates in quadrilateral elements. Communications in Numerical Methods in Engineering, 1999, 15, 841-852.	1.3	40
14	Hybrid displacement function element method: a simple hybrid-Trefftz stress element method for analysis of Mindlin's Reissner plate. International Journal for Numerical Methods in Engineering, 2014, 98, 203-234.	1.5	38
15	An unsymmetric 4-node, 8-DOF plane membrane element perfectly breaking through MacNeal's theorem. International Journal for Numerical Methods in Engineering, 2015, 103, 469-500.	1.5	38
16	A new hybrid-enhanced displacement-based element for the analysis of laminated composite plates. Computers and Structures, 2002, 80, 819-833.	2.4	37
17	An unsymmetric 8-node hexahedral element with high distortion tolerance. International Journal for Numerical Methods in Engineering, 2017, 109, 1130-1158.	1.5	35
18	Shape-free finite element method: The plane hybrid stress-function (HS-F) element method for anisotropic materials. Science China: Physics, Mechanics and Astronomy, 2011, 54, 653-665.	2.0	34

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19	Predictions of elastic property on 2.5D C/SiC composites based on numerical modeling and semi-analytical method. <i>Composites Part B: Engineering</i> , 2015, 74, 53-65.	5.9	34
20	A High-Performance Quadrilateral Flat Shell Element for Seismic Collapse Simulation of Tall Buildings and Its Implementation in OpenSees. <i>Journal of Earthquake Engineering</i> , 2018, 22, 1662-1682.	1.4	33
21	Hexahedral volume coordinate method (HVCM) and improvements on 3D Wilson hexahedral element. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008, 197, 4531-4548.	3.4	30
22	Quadrilateral membrane elements with analytical element stiffness matrices formulated by the new quadrilateral area coordinate method (QACM). <i>International Journal for Numerical Methods in Engineering</i> , 2009, 77, 1172-1200.	1.5	30
23	Developments of Mindlin-Reissner Plate Elements. <i>Mathematical Problems in Engineering</i> , 2015, 2015, 1-12.	0.6	27
24	High-performance geometric nonlinear analysis with the unsymmetric 4-node, 8-DOF plane element USAATFQ4. <i>International Journal for Numerical Methods in Engineering</i> , 2018, 114, 931-954.	1.5	27
25	The third form of the quadrilateral area coordinate method (QACM-III): Theory, application, and scheme of composite coordinate interpolation. <i>Finite Elements in Analysis and Design</i> , 2010, 46, 805-818.	1.7	25
26	Comparing different fidelity models for the impact analysis of large commercial aircrafts on a containment building. <i>Engineering Failure Analysis</i> , 2015, 57, 254-269.	1.8	21
27	An effective hybrid displacement function element method for solving the edge effect of Mindlin-Reissner plate. <i>International Journal for Numerical Methods in Engineering</i> , 2015, 102, 1449-1487.	1.5	19
28	An unsymmetric 8-node hexahedral solid-shell element with high distortion tolerance: Linear formulations. <i>International Journal for Numerical Methods in Engineering</i> , 2018, 116, 759-783.	1.5	19
29	Numerical determination of effective properties of voided piezoelectric materials using BNM. <i>Engineering Analysis With Boundary Elements</i> , 2005, 29, 636-646.	2.0	17
30	The analytical element stiffness matrix of a recent 4-node membrane element formulated by the quadrilateral area co-ordinate method. <i>Communications in Numerical Methods in Engineering</i> , 2006, 23, 1095-1110.	1.3	17
31	A quasi-static crack propagation simulation based on shape-free hybrid stress-function finite elements with simple remeshing. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014, 275, 159-188.	3.4	17
32	Some advances in high-performance finite element methods. <i>Engineering Computations</i> , 2019, 36, 2811-2834.	0.7	17
33	Application of the quadrilateral area coordinate method: a new element for laminated composite plate bending problems. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2007, 23, 561-575.	1.5	16
34	Numerical investigation of the fluid lag during hydraulic fracturing. <i>Engineering Computations</i> , 2018, 35, 2050-2077.	0.7	16
35	Geometrically nonlinear analysis with a 4-node membrane element formulated by the quadrilateral area coordinate method. <i>Finite Elements in Analysis and Design</i> , 2008, 44, 427-438.	1.7	15
36	Two generalized conforming quadrilateral Mindlin-Reissner plate elements based on the displacement function. <i>Finite Elements in Analysis and Design</i> , 2015, 99, 24-38.	1.7	14

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37	A simple unsymmetric 4-node 12-DOF membrane element for the modified couple stress theory. <i>International Journal for Numerical Methods in Engineering</i> , 2019, 119, 807-825.	1.5	14
38	Development of triangular flat-shell element using a new thin-thick plate bending element based on semiLoof constrains. <i>Structural Engineering and Mechanics</i> , 2003, 15, 83-114.	1.0	13
39	A joint diagonalisation approach for linear stochastic systems. <i>Computers and Structures</i> , 2010, 88, 1137-1148.	2.4	12
40	8-node unsymmetric distortion-immune element based on Airy stress solutions for plane orthotropic problems. <i>Acta Mechanica</i> , 2018, 229, 5031-5049.	1.1	12
41	A 4-node quadrilateral flat shell element formulated by the shape-free HDF plate and HSF membrane elements. <i>Engineering Computations</i> , 2016, 33, .	0.7	11
42	High-performance unsymmetric 3-node triangular membrane element with drilling DOFs can correctly undertake in-plane moments. <i>Engineering Computations</i> , 2018, 35, 2543-2556.	0.7	11
43	Generalized conforming Trefftz element for size-dependent analysis of thin microplates based on the modified couple stress theory. <i>Engineering Analysis With Boundary Elements</i> , 2021, 125, 46-58.	2.0	11
44	On convergence of nonconforming convex quadrilateral finite elements AGQ6. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2010, 199, 1816-1827.	3.4	10
45	Method of Area Coordinate " From Triangular to Quadrilateral Elements. <i>Advances in Structural Engineering</i> , 2001, 4, 1-11.	1.2	9
46	A meshless singular hybrid boundary node method for 2D elastostatics. <i>Journal of the Chinese Institute of Engineers, Transactions of the Chinese Institute of Engineers, Series A/Chung-kuo Kung Ch'eng Hsueh K'an</i> , 2004, 27, 481-490.	0.6	9
47	The Analytical Trial Function Method (ATFM) for Finite Element Analysis of Plane Crack/Notch Problems. <i>Key Engineering Materials</i> , 2008, 385-387, 617-620.	0.4	9
48	A novel joint diagonalization approach for linear stochastic systems and reliability analysis. <i>Engineering Computations</i> , 2012, 29, 221-244.	0.7	9
49	A priori error estimation for the stochastic perturbation method. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2015, 286, 1-21.	3.4	9
50	A New Triangular Hybrid Displacement Function Element for Static and Free Vibration Analyses of Mindlin-Reissner Plate. <i>Latin American Journal of Solids and Structures</i> , 2017, 14, 765-804.	0.6	9
51	An unsymmetric 8-node hexahedral solid-shell element with high distortion tolerance: Geometric nonlinear formulations. <i>International Journal for Numerical Methods in Engineering</i> , 2019, 120, 580-606.	1.5	9
52	Hyperelastic finite deformation analysis with the unsymmetric finite element method containing homogeneous solutions of linear elasticity. <i>International Journal for Numerical Methods in Engineering</i> , 2020, 121, 3702-3721.	1.5	9
53	Characteristic equation solution strategy for deriving fundamental analytical solutions of 3D isotropic elasticity. <i>Applied Mathematics and Mechanics (English Edition)</i> , 2012, 33, 1253-1264.	1.9	7
54	A Novel Shape-Free Plane Quadratic Polygonal Hybrid Stress-Function Element. <i>Mathematical Problems in Engineering</i> , 2015, 2015, 1-13.	0.6	7

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55	Distortion-resistant and locking-free eight-node elements effectively capturing the edge effects of Mindlin's Reissner plates. <i>Engineering Computations</i> , 2017, 34, 548-586.	0.7	7
56	A hybrid-stress element based on Hamilton principle. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2010, 26, 625-634.	1.5	6
57	Shape-Free Finite Element Method: Another Way between Mesh and Mesh-Free Methods. <i>Mathematical Problems in Engineering</i> , 2013, 2013, 1-14.	0.6	6
58	Generalized Neumann Expansion and Its Application in Stochastic Finite Element Methods. <i>Mathematical Problems in Engineering</i> , 2013, 2013, 1-13.	0.6	6
59	An efficient 4-node facet shell element for the modified couple stress elasticity. <i>International Journal for Numerical Methods in Engineering</i> , 2022, 123, 992-1012.	1.5	5
60	Advances in Finite Element Method. <i>Mathematical Problems in Engineering</i> , 2014, 2014, 1-2.	0.6	4
61	Shape-free polygonal hybrid displacement-function element method for analyses of Mindlin's Reissner plates. <i>Engineering With Computers</i> , 2021, 37, 1975.	3.5	4
62	Shape-free arbitrary polygonal hybrid stress/displacement-function flat shell element for linear and geometrically nonlinear analyses. <i>International Journal for Numerical Methods in Engineering</i> , 2021, 122, 4172-4218.	1.5	4
63	Effect of Beam Height on Elastic Impact Load Subjected to Transverse Impact of Bar. <i>Key Engineering Materials</i> , 0, 462-463, 259-264.	0.4	3
64	Improved hybrid displacement function (IHDF) element scheme for analysis of Mindlin's Reissner plate with edge effect. <i>International Journal for Numerical Methods in Engineering</i> , 2017, 111, 1120-1169.	1.5	3
65	A novel hybrid stress-function finite element method immune to severe mesh distortion. <i>IOP Conference Series: Materials Science and Engineering</i> , 2010, 10, 012220.	0.3	2
66	Several Treatments on Nonconforming Element Failed in the Strict Patch Test. <i>Mathematical Problems in Engineering</i> , 2013, 2013, 1-7.	0.6	2
67	Quasi-Static Crack Propagation Modeling Using Shape-Free Hybrid Stress-Function Elements with Drilling Degrees of Freedom. <i>International Journal of Computational Methods</i> , 2016, 13, 1650014.	0.8	2
68	Elastic-Plastic Torque Analysis of Notched Cross-Section Bars Using the Finite Difference Method. <i>Key Engineering Materials</i> , 0, 385-387, 869-872.	0.4	1
69	Four-Node Generalized Conforming Membrane Elements with Drilling DOFs Using Quadrilateral Area Coordinate Methods. <i>Mathematical Problems in Engineering</i> , 2015, 2015, 1-13.	0.6	1
70	New hybrid-Trefftz Mindlin's Reissner plate elements for efficiently modeling the edge zones near free/SS1 edges. <i>Engineering Computations</i> , 2018, 35, 136-156.	0.7	1
71	Extension of the unsymmetric 8-node hexahedral solid element US-ATFH8 to geometrically nonlinear analysis. <i>Engineering Computations</i> , 2021, 38, 3219-3253.	0.7	1
72	Area co-ordinates used in quadrilateral elements. , 1999, 15, 533.		1

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73	Some basic formulae for area co-ordinates in quadrilateral elements. , 1999, 15, 841.		1
74	Some Recent Advances on the Quadrilateral Area Coordinate Method. , 2007, , 380-380.		1
75	A new hybrid-enhanced displacement-based element for the analysis of laminated composite plates. , 2001, , 95-98.		1
76	Computational Strategies for Curved-side Elements Formulated by Quadrilateral Area Coordinates (QAC). , 2006, , 250-250.		0
77	Introduction To The Third Form Of The Quadrilateral Area Coordinate Method (QACM-III). , 2010, , .		0
78	Advances in Finite Element Method 2014. Mathematical Problems in Engineering, 2015, 2015, 1-2.	0.6	0
79	Advances in Finite Element Method 2016. Mathematical Problems in Engineering, 2016, 2016, 1-2.	0.6	0
80	Generalized Conforming Thin Plate Element II "Line-Point and SemiLoof Conforming Schemes. , 2009, , 120-175.		0
81	Generalized Conforming Element for the Analysis of Piezoelectric Laminated Composite Plates. , 2009, , 304-324.		0
82	The Sub-Region Variational Principles. , 2009, , 15-65.		0
83	Sub-Region Mixed Element I " Fundamental Theory and Crack Problem. , 2009, , 405-437.		0
84	Variational Principles with Several Adjustable Parameters. , 2009, , 66-85.		0
85	Sub-Region Mixed Element II "V-Notch Problem. , 2009, , 438-494.		0
86	Generalized Conforming Element for the Analysis of the Laminated Composite Plates. , 2009, , 268-303.		0
87	Generalized Conforming Thin Plate Element III " Perimeter-Point and Least-Square Conforming Schemes. , 2009, , 176-202.		0
88	Generalized Conforming Thin Plate Element I "Introduction. , 2009, , 101-119.		0
89	Analytical Trial Function Method I " Membrane and Plate Bending Elements. , 2009, , 495-517.		0
90	Quadrilateral Area Coordinate Systems, Part II " New Tools for Constructing Quadrilateral Elements. , 2009, , 582-640.		0

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91	Quadrilateral Area Coordinate Systems, Part I " Theory and Formulae. , 2009, , 546-581.		0
92	Generalized Conforming Membrane and Shell Elements. , 2009, , 325-401.		0
93	Analytical Trial Function Method II " Singular Elements with Crack and Notch. , 2009, , 518-545.		0
94	Generalized Conforming Thick Plate Element. , 2009, , 203-267.		0