Glaucio H Paulino

List of Publications by Year
in descending order

231 papers	14,277 citations	16607 64 h-index	26007 108 g-index
234 all docs	234 docs citations	234 times ranked	6845 citing authors

#	Article	IF	Citations
1	Cohesive Zone Models: A Critical Review of Traction-Separation Relationships Across Fracture Surfaces. Applied Mechanics Reviews, 2011, 64, .	10.1	494
2	PolyMesher: a general-purpose mesh generator for polygonal elements written in Matlab. Structural and Multidisciplinary Optimization, 2012, 45, 309-328.	3.6	457
3	Origami tubes assembled into stiff, yet reconfigurable structures and metamaterials. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 12321-12326.	7.3	435
4	A unified potential-based cohesive model of mixed-mode fracture. Journal of the Mechanics and Physics of Solids, 2009, 57, 891-908.	4.9	365
5	Bridging topology optimization and additive manufacturing. Structural and Multidisciplinary Optimization, 2016, 53, 175-192.	3.6	334
6	A bilinear cohesive zone model tailored for fracture of asphalt concrete considering viscoelastic bulk material. Engineering Fracture Mechanics, 2006, 73, 2829-2848.	4.3	317
7	On the Virtual Element Method for three-dimensional linear elasticity problems on arbitrary polyhedral meshes. Computer Methods in Applied Mechanics and Engineering, 2014, 282, 132-160.	6.7	313
8	Finite element evaluation of mixed mode stress intensity factors in functionally graded materials. International Journal for Numerical Methods in Engineering, 2002, 53, 1903-1935.	2.8	303
9	PolyTop: a Matlab implementation of a general topology optimization framework using unstructured polygonal finite element meshes. Structural and Multidisciplinary Optimization, 2012, 45, 329-357.	3.6	214
10	A computational paradigm for multiresolution topology optimization (MTOP). Structural and Multidisciplinary Optimization, 2010, 41, 525-539.	3.6	188
11	Transient heat conduction in homogeneous and non-homogeneous materials by the Laplace transform Galerkin boundary element method. Engineering Analysis With Boundary Elements, 2002, 26, 119-132.	3.8	181
12	Modeling bamboo as a functionally graded material: lessons for the analysis of affordable materials. Journal of Materials Science, 2006, 41, 6991-7004.	3.7	177
13	Computational implementation of the PPR potential-based cohesive model in ABAQUS: Educational perspective. Engineering Fracture Mechanics, 2012, 93, 239-262.	4.3	173
14	Concrete fracture prediction using bilinear softening. Cement and Concrete Composites, 2007, 29, 300-312.	10.8	171
15	Cohesive zone modeling of dynamic failure in homogeneous and functionally graded materials. International Journal of Plasticity, 2005, 21, 1195-1254.	8.8	170
16	Bar and hinge models for scalable analysis of origami. International Journal of Solids and Structures, 2017, 124, 26-45.	2.7	169
17	Untethered control of functional origami microrobots with distributed actuation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 24096-24101.	7.3	166
18	Mixed-mode fracture of orthotropic functionally graded materials using finite elements and the modified crack closure method. Engineering Fracture Mechanics, 2002, 69, 1557-1586.	4.3	164

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19	Simulation of Crack Propagation in Asphalt Concrete Using an Intrinsic Cohesive Zone Model. Journal of Engineering Mechanics - ASCE, 2006, 132, 1215-1223.	3.0	162
20	Transient thermal stress analysis of an edge crack in a functionally graded material. International Journal of Fracture, 2001, 107, 73-98.	2.2	155
21	Unraveling metamaterial properties in zigzag-base folded sheets. Science Advances, 2015, 1, e1500224.	10.6	155
22	T-stress, mixed-mode stress intensity factors, and crack initiation angles in functionally graded materials: a unified approach using the interaction integral method. Computer Methods in Applied Mechanics and Engineering, 2003, 192, 1463-1494.	6.7	154
23	Large-scale topology optimization using preconditioned Krylov subspace methods with recycling. International Journal for Numerical Methods in Engineering, 2007, 69, 2441-2468.	2.8	154
24	The simple boundary element method for transient heat conduction in functionally graded materials. Computer Methods in Applied Mechanics and Engineering, 2004, 193, 4511-4539.	6.7	152
25	Stretchable origami robotic arm with omnidirectional bending and twisting. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.3	151
26	Connecting architecture and engineering through structural topology optimization. Engineering Structures, 2014, 59, 716-726.	5.3	149
27	Cohesive fracture modeling of elasticâ€“plastic crack growth in functionally graded materials. Engineering Fracture Mechanics, 2003, 70, 1885-1912.	4.3	145
28	Stress-intensity factors for surface cracks in functionally graded materials under mode-I thermomechanical loading. International Journal of Solids and Structures, 2004, 41, 1081-1118.	2.7	142
29	Polygonal finite elements for topology optimization: A unifying paradigm. International Journal for Numerical Methods in Engineering, 2010, 82, 671-698.	2.8	140
30	The interaction integral for fracture of orthotropic functionally graded materials: evaluation of stress intensity factors. International Journal of Solids and Structures, 2003, 40, 3967-4001.	2.7	129
31	Cohesive fracture model for functionally graded fiber reinforced concrete. Cement and Concrete Research, 2010, 40, 956-965.	11.0	129
32	Soft robotic origami crawler. Science Advances, 2022, 8, eabm7834.	10.6	125
33	Extrinsic cohesive modelling of dynamic fracture and microbranching instability in brittle materials. International Journal for Numerical Methods in Engineering, 2007, 72, 893-923.	2.8	121
34	Consistent Formulations of the Interaction Integral Method for Fracture of Functionally Graded Materials. Journal of Applied Mechanics, Transactions ASME, 2005, 72, 351-364.	2.3	119
35	Topology optimization with manufacturing constraints: A unified projection-based approach. Advances in Engineering Software, 2016, 100, 97-112.	3.8	118
36	Nonlinear mechanics of non-rigid origami: an efficient computational approach. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20170348.	2.1	113

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37	Integral equations with hypersingular kernelsâ€“â€“theory and applications to fracture mechanics. International Journal of Engineering Science, 2003, 41, 683-720.	5.1	107
38	An accurate scheme for mixed-mode fracture analysis of functionally graded materials using the interaction integral and micromechanics models. International Journal for Numerical Methods in Engineering, 2003, 58, 1457-1497.	2.8	106
39	Application of layout and topology optimization using pattern gradation for the conceptual design of buildings. Structural and Multidisciplinary Optimization, 2011, 43, 165-180.	3.6	106
40	Direct Extraction of Cohesive Fracture Properties from Digital Image Correlation: A Hybrid Inverse Technique. Experimental Mechanics, 2011, 51, 143-163.	2.1	101
41	Dynamic stress intensity factors for homogeneous and smoothly heterogeneous materials using the interaction integral method. International Journal of Solids and Structures, 2006, 43, 4830-4866.	2.7	99
42	GRAND â€" Ground structure based topology optimization for arbitrary 2D domains using MATLAB. Structural and Multidisciplinary Optimization, 2014, 50, 861-882.	3.6	98
43	GRAND3 â€" Ground structure based topology optimization for arbitrary 3D domains using MATLAB. Structural and Multidisciplinary Optimization, 2015, 52, 1161-1184.	3.6	92
44	Mode I fracture of adhesive joints using tailored cohesive zone models. International Journal of Fracture, 2009, 157, 193-204.	2.2	88
45	A new approach to compute T-stress in functionally graded materials by means of the interaction integral method. Engineering Fracture Mechanics, 2004, 71, 1907-1950.	4.3	86
46	Symmetric Galerkin boundary integral formulation for interface and multi-zone problems. International Journal for Numerical Methods in Engineering, 1997, 40, 3085-3101.	2.8	84
47	Designing patient-specific 3D printed craniofacial implants using a novel topology optimization method. Medical and Biological Engineering and Computing, 2016, 54, 1123-1135.	2.8	83
48	Topological optimization for designing patient-specific large craniofacial segmental bone replacements. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 13222-13227.	7.3	82
49	Single-loop system reliability-based topology optimization considering statistical dependence between limit-states. Structural and Multidisciplinary Optimization, 2011, 44, 593-611.	3.6	82
50	Assessment of Existing Micro-mechanical Models for Asphalt Mastics Considering Viscoelastic Effects. Road Materials and Pavement Design, 2008, 9, 31-57.	4.0	81
51	Determination of the kink point in the bilinear softening model for concrete. Engineering Fracture Mechanics, 2008, 75, 3806-3818.	4.3	80
52	Integration of singular enrichment functions in the generalized/extended finite element method for threeâ€dimensional problems. International Journal for Numerical Methods in Engineering, 2009, 78, 1220-1257.	2.8	77
53	Mixed-mode J-integral formulation and implementation using graded elements for fracture analysis of nonhomogeneous orthotropic materials. Mechanics of Materials, 2003, 35, 107-128.	3.3	75
54	Improving multiresolution topology optimization via multiple discretizations. International Journal for Numerical Methods in Engineering, 2012, 92, 507-530.	2.8	75

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55	Continuous-range tunable multilayer frequency-selective surfaces using origami and inkjet printing. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 13210-13215.	7.3	73
56	Programmable Deployment of Tensegrity Structures by Stimulus-Responsive Polymers. Scientific Reports, 2017, 7, 3511.	3.4	72
57	Multiâ€actuated functionally graded piezoelectric microâ€tools design: A multiphysics topology optimization approach. International Journal for Numerical Methods in Engineering, 2009, 77, 301-336.	2.8	71
58	A growing library of three-dimensional cohesive elements for use in ABAQUS. Engineering Fracture Mechanics, 2014, 126, 190-216.	4.3	70
59	Bloch wave framework for structures with nonlocal interactions: Application to the design of origami acoustic metamaterials. Journal of the Mechanics and Physics of Solids, 2018, 118, 115-132.	4.9	70
60	On Fracture Criteria for Mixed-Mode Crack Propagation in Functionally Graded Materials. Mechanics of Advanced Materials and Structures, 2007, 14, 227-244.	2.5	69
61	Adaptive mesh refinement and coarsening for cohesive zone modeling of dynamic fracture. International Journal for Numerical Methods in Engineering, 2012, 92, 1-35.	2.8	69
62	Green's function for a twoâ€“dimensional exponentially graded elastic medium. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2004, 460, 1689-1706.	2.1	68
63	Geometric Mechanics of Origami Patterns Exhibiting Poissonâ€™s Ratio Switch by Breaking Mountain and Valley Assignment. Physical Review Letters, 2019, 122, 155501.	8.0	68
64	Correspondence Principle in Viscoelastic Functionally Graded Materials. Journal of Applied Mechanics, Transactions ASME, 2001, 68, 129-132.	2.3	66
65	Single-Loop System Reliability-Based Design Optimization Using Matrix-Based System Reliability Method: Theory and Applications. Journal of Mechanical Design, Transactions of the ASME, 2010, 132, .	2.9	66
66	Computation of Mixed-Mode Stress Intensity Factors for Cracks in Three-Dimensional Functionally Graded Solids. Journal of Engineering Mechanics - ASCE, 2006, 132, 1-15.	3.0	65
67	Origami tubes with reconfigurable polygonal cross-sections. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20150607.	2.1	65
68	Invariant and smooth limit of discrete geometry folded from bistable origami leading to multistable metasurfaces. Nature Communications, 2019, 10, 4238.	13.1	65
69	Multi-material continuum topology optimization with arbitrary volume and mass constraints. Computer Methods in Applied Mechanics and Engineering, 2018, 340, 798-823.	6.7	64
70	Universal machine learning for topology optimization. Computer Methods in Applied Mechanics and Engineering, 2021, 375, 112739.	6.7	63
71	A compact adjacency-based topological data structure for finite element mesh representation. International Journal for Numerical Methods in Engineering, 2005, 64, 1529-1556.	2.8	62
72	Assessment of cohesive traction-separation relationships in ABAQUS: A comparative study. Mechanics Research Communications, 2016, 78, 71-78.	1.9	62

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73	Multi-material topology optimization with multiple volume constraints: a general approach applied to ground structures with material nonlinearity. Structural and Multidisciplinary Optimization, 2018, 57, 161-182.	3.6	62
74	Polygonal finite elements for incompressible fluid flow. International Journal for Numerical Methods in Fluids, 2014, 74, 134-151.	1.7	61
75	Topology optimization using polytopes. Computer Methods in Applied Mechanics and Engineering, 2015, 293, 411-430.	6.7	61
76	Simulation of Crack Propagation in Functionally Graded Materials Under Mixed-Mode and Non-Proportional Loading. International Journal of Mechanics and Materials in Design, 2004, 1, 63-94.	3.1	59
77	Honeycomb Wachspress finite elements for structural topology optimization. Structural and Multidisciplinary Optimization, 2009, 37, 569-583.	3.6	58
78	3D printing of complex origami assemblages for reconfigurable structures. Soft Matter, 2018, 14, 8051-8059.	2.8	58
79	Gradient Elasticity Theory for Mode III Fracture in Functionally Graded Materialsâ€"Part I: Crack Perpendicular to the Material Gradation. Journal of Applied Mechanics, Transactions ASME, 2003, 70, 531-542.	2.3	56
80	A general topology-based framework for adaptive insertion of cohesive elements in finite element meshes. Engineering With Computers, 2008, 24, 59-78.	5.8	56
81	Layout and material gradation in topology optimization of functionally graded structures: a globalâ€"local approach. Structural and Multidisciplinary Optimization, 2010, 42, 855-868.	3.6	56
82	Investigation of the Fracture Resistance of Hot-Mix Asphalt Concrete Using a Disk-Shaped Compact Tension Test. Transportation Research Record, 2005, 1929, 183-192.	1.8	55
83	Optimal design of periodic functionally graded composites with prescribed properties. Structural and Multidisciplinary Optimization, 2009, 38, 469-489.	3.6	54
84	Addressing integration error for polygonal finite elements through polynomial projections: A patch test connection. Mathematical Models and Methods in Applied Sciences, 2014, 24, 1701-1727.	3.3	54
85	A Unified Library of Nonlinear Solution Schemes. Applied Mechanics Reviews, 2011, 64, .	10.1	53
86	Node and element resequencing using the Laplacian of a finite element graph: Part Iâ€"General concepts and algorithm. International Journal for Numerical Methods in Engineering, 1994, 37, 1511-1530.	2.8	51
87	T-stress in orthotropic functionally graded materials: Lekhnitskii and Stroh formalisms. International Journal of Fracture, 2004, 126, 345-389.	2.2	51
88	Study on the role of laser surface irradiation on damage and decohesion of Al/epoxy joints. International Journal of Adhesion and Adhesives, 2012, 39, 33-41.	3.0	51
89	Computational homogenization of the debonding of particle reinforced composites: The role of interphases in interfaces. Computational Materials Science, 2015, 109, 209-224.	3.1	51
90	Optimal and continuous multilattice embedding. Science Advances, 2021, 7, .	10.6	49

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91	A modified Q4/Q4 element for topology optimization. Structural and Multidisciplinary Optimization, 2009, 37, 255-264.	3.6	48
92	Topology optimization with local stress constraints: a stress aggregation-free approach. Structural and Multidisciplinary Optimization, 2020, 62, 1639-1668.	3.6	48
93	Wave propagation and dynamic analysis of smoothly graded heterogeneous continua using graded finite elements. International Journal of Solids and Structures, 2007, 44, 3601-3626.	2.7	47
94	Identification of cohesive zone model and elastic parameters of fiber-reinforced cementitious composites using digital image correlation and a hybrid inverse technique. Cement and Concrete Composites, 2011, 33, 572-585.	10.8	47
95	PolyMat: an efficient Matlab code for multi-material topology optimization. Structural and Multidisciplinary Optimization, 2018, 58, 2727-2759.	3.6	47
96	Crack Tip Interpolation, Revisited. SIAM Journal on Applied Mathematics, 1998, 58, 428-455.	1.8	46
97	Design of complex bone internal structure using topology optimization with perimeter control. Computers in Biology and Medicine, 2018, 94, 74-84.	7.2	46
98	Finite Particle Method for Progressive Failure Simulation of Truss Structures. Journal of Structural Engineering, 2011, 137, 1168-1181.	3.4	45
99	Unstructured polygonal meshes with adaptive refinement for the numerical simulation of dynamic cohesive fracture. International Journal of Fracture, 2014, 189, 33-57.	2.2	45
100	Material nonlinear topology optimization using the ground structure method with a discrete filtering scheme. Structural and Multidisciplinary Optimization, 2017, 55, 2045-2072.	3.6	45
101	A unified approach for topology optimization with local stress constraints considering various failure criteria: von Mises, Druckerâ€“Prager, Tresca, Mohrâ€“Coulomb, Breslerâ€“ Pister and Willamâ€“Warnke. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20190861.	2.1	45
102	PolyStress: a Matlab implementation for local stress-constrained topology optimization using the augmented Lagrangian method. Structural and Multidisciplinary Optimization, 2021, 63, 2065-2097.	3.6	45
103	Maximizing phononic band gaps in piezocomposite materials by means of topology optimization. Journal of the Acoustical Society of America, 2014, 136, 494-501.	1.2	44
104	Adaptive dynamic cohesive fracture simulation using nodal perturbation and edgeâ€swap operators. International Journal for Numerical Methods in Engineering, 2010, 84, 1303-1343.	2.8	43
105	Phase-field based topology optimization with polygonal elements: a finite volume approach for the evolution equation. Structural and Multidisciplinary Optimization, 2012, 46, 327-342.	3.6	43
106	Dense Layered Molybdenum Disilicideâ€“Silicon Carbide Functionally Graded Composites Formed by Fieldâ€Activated Synthesis. Journal of the American Ceramic Society, 2001, 84, 962-968.	3.8	42
107	An explicit elastic solution for a brittle film with periodic cracks. International Journal of Fracture, 2008, 153, 39-52.	2.2	42
108	Multi-material thermomechanical topology optimization with applications to additive manufacturing: Design of main composite part and its support structure. Computer Methods in Applied Mechanics and Engineering, 2020, 363, 112812.	6.7	42

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109	Toward GPU accelerated topology optimization on unstructured meshes. Structural and Multidisciplinary Optimization, 2013, 48, 473-485.	3.6	41
110	A simple boundary element method for problems of potential in non-homogeneous media. International Journal for Numerical Methods in Engineering, 2004, 60, 2203-2230.	2.8	40
111	Symmetric Galerkin boundary element computation of T -stress and stress intensity factors for mixed-mode cracks by the interaction integral method. Engineering Analysis With Boundary Elements, 2004, 28, 1335-1350.	3.8	40
112	Unraveling tensegrity tessellations for metamaterials with tunable stiffness and bandgaps. Journal of the Mechanics and Physics of Solids, 2019, 131, 147-166.	4.9	40
113	HYPERSINGULAR RESIDUALSâ€"A NEW APPROACH FOR ERROR ESTIMATION IN THE BOUNDARY ELEMENT METHOD. International Journal for Numerical Methods in Engineering, 1996, 39, 2005-2029.	2.8	39
114	Î´₂₅ Crack opening displacement parameter in cohesive zone models: experiments and simulations in asphalt concrete. Fatigue and Fracture of Engineering Materials and Structures, 2008, 31, 850-856.	3.4	39
115	IlliTC â€“ low-temperature cracking model for asphalt pavements. Road Materials and Pavement Design, 2013, 14, 57-78.	4.0	39
116	Gradient correction for polygonal and polyhedral finite elements. International Journal for Numerical Methods in Engineering, 2015, 102, 728-747.	2.8	39
117	Global sensitivity analysis in the identification of cohesive models using full-field kinematic data. International Journal of Solids and Structures, 2015, 55, 66-78.	2.7	39
118	Fluid flow topology optimization in PolyTop: stability and computational implementation. Structural and Multidisciplinary Optimization, 2016, 54, 1345-1364.	3.6	39
119	On nonconvex meshes for elastodynamics using virtual element methods with explicit time integration. Computer Methods in Applied Mechanics and Engineering, 2019, 356, 669-684.	6.7	39
120	Application of Graded Finite Elements for Asphalt Pavements. Journal of Engineering Mechanics - ASCE, 2006, 132, 240-249.	3.0	37
121	A critical comparative assessment of differential equation-driven methods for structural topology optimization. Structural and Multidisciplinary Optimization, 2013, 48, 685-710.	3.6	37
122	Auxetic structure design using compliant mechanisms: A topology optimization approach with polygonal finite elements. Advances in Engineering Software, 2019, 129, 69-80.	3.8	37
123	A simple and effective inverse projection scheme for void distribution control in topology optimization. Structural and Multidisciplinary Optimization, 2009, 39, 359-371.	3.6	36
124	Bridging art and engineering using Escher-based virtual elements. Structural and Multidisciplinary Optimization, 2015, 51, 867-883.	3.6	36
125	Convex topology optimization for hyperelastic trusses based on the ground-structure approach. Structural and Multidisciplinary Optimization, 2015, 51, 287-304.	3.6	35
126	A simple and effective gradient recovery scheme and a posteriori error estimator for the Virtual Element Method (VEM). Computer Methods in Applied Mechanics and Engineering, 2019, 347, 21-58.	6.7	35

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127	Polygonal multiresolution topology optimization (PolyMTOP) for structural dynamics. Structural and Multidisciplinary Optimization, 2016, 53, 673-694.	3.6	33
128	A study on the thermodynamic consistency of the Parkâ€“Paulinoâ€“Roesler (PPR) cohesive fracture model. Mechanics Research Communications, 2016, 78, 100-109.	1.9	33
129	The meshless standard and hypersingular boundary node methods?applications to error estimation and adaptivity in three-dimensional problems. International Journal for Numerical Methods in Engineering, 2001, 50, 2233-2269.	2.8	32
130	On the enhancement of bond toughness for Al/epoxy T-peel joints with laser treated substrates. International Journal of Fracture, 2011, 171, 139-150.	2.2	32
131	Constitutive behaviors of composites with interface debonding: the extended Moriâ€“Tanaka method for uniaxial tension. International Journal of Fracture, 2007, 146, 139-148.	2.2	31
132	On the effect of constraint parameters on the generalized displacement control method. Mechanics Research Communications, 2014, 56, 123-129.	1.9	31
133	PolyTop++: an efficient alternative for serial and parallel topology optimization on CPUs & GPUs. Structural and Multidisciplinary Optimization, 2015, 52, 845-859.	3.6	31
134	A hybrid experimental/numerical technique to extract cohesive fracture properties for mode-I fracture of quasi-brittle materials. International Journal of Fracture, 2011, 169, 113-131.	2.2	30
135	Folding at the Microscale: Enabling Multifunctional 3D Origamiâ€Architected Metamaterials. Small, 2020, 16, e2002229.	10.3	30
136	A methodology for adaptive finite element analysis: Towards an integrated computational environment. Computational Mechanics, 1999, 23, 361-388.	3.9	29
137	Geometric nonlinear analyses of functionally graded beams using a tailored Lagrangian formulation. Mechanics Research Communications, 2011, 38, 553-559.	1.9	29
138	Optimization of material distribution in functionally graded structures with stress constraints. Communications in Numerical Methods in Engineering, 2006, 23, 535-551.	1.3	28
139	A paradigm for higher-order polygonal elements in finite elasticity using a gradient correction scheme. Computer Methods in Applied Mechanics and Engineering, 2016, 306, 216-251.	6.7	28
140	Adaptive multi-material topology optimization with hyperelastic materials under large deformations: A virtual element approach. Computer Methods in Applied Mechanics and Engineering, 2020, 370, 112976.	6.7	28
141	Effective Thermal Conductivity of Functionally Graded Particulate Nanocomposites With Interfacial Thermal Resistance. Journal of Applied Mechanics, Transactions ASME, 2008, 75, .	2.3	27
142	Structural topology optimization under constraints on instantaneous failure probability. Structural and Multidisciplinary Optimization, 2016, 53, 773-799.	3.6	27
143	Gradient Elasticity Theory for Mode III Fracture in Functionally Graded Materialsâ€”Part II: Crack Parallel to the Material Gradation. Journal of Applied Mechanics, Transactions ASME, 2008, 75, .	2.3	26
144	On the constitutive relation of materials with microstructure using a potential-based cohesive model for interface interaction. Engineering Fracture Mechanics, 2010, 77, 1153-1174.	4.3	26

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145	Truss layout optimization within a continuum. Structural and Multidisciplinary Optimization, 2013, 48, 1-16.	3.6	26
146	Stochastic sampling for deterministic structural topology optimization with many load cases: Density-based and ground structure approaches. Computer Methods in Applied Mechanics and Engineering, 2017, 325, 463-487.	6.7	26
147	Tensegrity topology optimization by force maximization on arbitrary ground structures. Structural and Multidisciplinary Optimization, 2019, 59, 2041-2062.	3.6	26
148	Virtual element method (VEM)-based topology optimization: an integrated framework. Structural and Multidisciplinary Optimization, 2020, 62, 1089-1114.	3.6	26
149	Implementation and verification of the Parkâ€“Paulinoâ€“Roesler cohesive zone model in 3D. Engineering Fracture Mechanics, 2014, 120, 26-42.	4.3	25
150	Efficient Handling of Implicit Entities in Reduced Mesh Representations. Journal of Computing and Information Science in Engineering, 2005, 5, 348-359.	2.7	24
151	Reliability-based topology optimization using a new method for sensitivity approximation - application to ground structures. Structural and Multidisciplinary Optimization, 2016, 54, 553-571.	3.6	24
152	Filtering structures out of ground structures â€“ a discrete filtering tool for structural design optimization. Structural and Multidisciplinary Optimization, 2016, 54, 95-116.	3.6	24
153	Numerical recipes for elastodynamic virtual element methods with explicit time integration. International Journal for Numerical Methods in Engineering, 2020, 121, 1-31.	2.8	24
154	Nodal sensitivities as error estimates in computational mechanics. Acta Mechanica, 1997, 121, 191-213.	2.1	22
155	EVALUATION OF AUTOMATIC DOMAIN PARTITIONING ALGORITHMS FOR PARALLEL FINITE ELEMENT ANALYSIS. International Journal for Numerical Methods in Engineering, 1997, 40, 1025-1051.	2.8	22
156	On hypersingular surface integrals in the symmetric Galerkin boundary element method: application to heat conduction in exponentially graded materials. International Journal for Numerical Methods in Engineering, 2005, 62, 122-157.	2.8	22
157	PolyDyna: a Matlab implementation for topology optimization of structures subjected to dynamic loads. Structural and Multidisciplinary Optimization, 2021, 64, 957-990.	3.6	22
158	Influence of the Cohesive Zone Model Shape Parameter on Asphalt Concrete Fracture Behavior. AIP Conference Proceedings, 2008, , .	0.4	21
159	Recycling Krylov subspaces for efficient large-scale electrical impedance tomography. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 3101-3110.	6.7	21
160	Optimallyâ€Tailored Spinodal Architected Materials for Multiscale Design and Manufacturing. Advanced Materials, 2022, 34, e2109304.	21.7	21
161	Machine learning for topology optimization: Physics-based learning through an independent training strategy. Computer Methods in Applied Mechanics and Engineering, 2022, 398, 115116.	6.7	21
162	Macroelement and Macropatch Approaches to Structural Topology Optimization Using the Ground Structure Method. Journal of Structural Engineering, 2016, 142, .	3.4	20

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163	An efficient mixed-mode rate-dependent cohesive fracture model using sigmoidal functions. Engineering Fracture Mechanics, 2018, 192, 307-327.	4.3	20
164	Big influence of small random imperfections in origami-based metamaterials. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, .	2.1	20
165	Title is missing!. International Journal of Fracture, 2001, 111, 283-303.	2.2	19
166	Effect of material gradation on K-dominance of fracture specimens. Engineering Fracture Mechanics, 2006, 73, 643-648.	4.3	19
167	Multimaterial topology optimization with multiple volume constraints: Combining the ZPR update with a groundâ€structure algorithm to select a single material per overlapping set. International Journal for Numerical Methods in Engineering, 2018, 114, 1053-1073.	2.8	19
168	Experimental realization of tunable Poissonâ€™s ratio in deployable origami metamaterials. Extreme Mechanics Letters, 2022, 53, 101685.	4.2	19
169	Node and element resequencing using the Laplacian of a finite element graph: Part IIâ€”Implementation and numerical results. International Journal for Numerical Methods in Engineering, 1994, 37, 1531-1555.	2.8	18
170	Evolutionary characteristic length method for smeared cracking finite element models. Finite Elements in Analysis and Design, 1997, 27, 99-108.	3.2	18
171	ON THE POISSON'S RATIO EFFECT ON MIXED-MODE STRESS INTENSITY FACTORS AND T-STRESS IN FUNCTIONALLY GRADED MATERIALS. International Journal of Computational Engineering Science, 2004, 05, 833-861.	0.1	18
172	Parameter sensitivity of system reliability using sequential compounding method. Structural Safety, 2015, 55, 26-36.	5.4	18
173	Inverse Estimation of Cohesive Fracture Properties of Asphalt Mixtures Using an Optimization Approach. Experimental Mechanics, 2017, 57, 637-648.	2.1	18
174	Fractional topology optimization of periodic multi-material viscoelastic microstructures with tailored energy dissipation. Computer Methods in Applied Mechanics and Engineering, 2020, 372, 113307.	6.7	18
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