Glaucio H Paulino

List of Publications by Year in Descending Order

227 papers	10,708 citations	56 h-index	92 g-index
234 ext. papers	12,369 ext. citations	4.1 avg, IF	7 L-index

#	Paper	IF	Citations
227	Optimally-Tailored Spinodal Architected Materials for Multiscale Design and Manufacturing.. *Advanced Materials*, **2022**, e2109304	24	3
226	Soft robotic origami crawler.. *Science Advances*, **2022**, 8, eabm7834	14.3	16
225	Experimental realization of tunable Poisson ratio in deployable origami metamaterials. *Extreme Mechanics Letters*, **2022**, 53, 101685	3.9	1
224	Reprogrammable Kinematic Branches in Tessellated Origami Structures. *Journal of Mechanisms and Robotics*, **2021**, 13,	2.2	5
223	Optimal and continuous multilattice embedding. *Science Advances*, **2021**, 7,	14.3	14
222	Editorial to the special issue: Recent advances in Computational Mechanics and Innovative Materials, in honor of Professor J.N. Reddy for his 75th birthday. *Meccanica*, **2021**, 56, 1265-1267	2.1	
221	Bio-Inspired Origami Metamaterials With Metastable Phases Through Mechanical Phase Transitions. *Journal of Applied Mechanics, Transactions ASME*, **2021**, 88,	2.7	2
220	B-bar virtual element method for nearly incompressible and compressible materials. *Meccanica*, **2021**, 56, 1423-1439	2.1	2
219	Computational Morphogenesis: Morphologic constructions using polygonal discretizations. *International Journal for Numerical Methods in Engineering*, **2021**, 122, 25-52	2.4	0
218	Dynamic response of deep-water catenary risers made of functionally graded materials. *Mechanics Research Communications*, **2021**, 111, 103660	2.2	2
217	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	14
216	Universal machine learning for topology optimization. *Computer Methods in Applied Mechanics and Engineering*, **2021**, 375, 112739	5.7	15
215	PolyDyna: a Matlab implementation for topology optimization of structures subjected to dynamic loads. *Structural and Multidisciplinary Optimization*, **2021**, 64, 957	3.6	4
214	Rethinking Origami: A Generative Specification of Origami Patterns with Shape Grammars. *CAD Computer Aided Design*, **2021**, 137, 103029	2.9	3
213	Stretchable origami robotic arm with omnidirectional bending and twisting. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	35
212	Optimized lattice-based metamaterials for elastostatic cloaking. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2021**, 477, 20210418	2.4	1
211	A unified approach for topology optimization with local stress constraints considering various failure criteria: von Mises, Drucker-Prager, Tresca, Mohr-Coulomb, Bresler- Pister and Willam-Warnke. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2020**, 476, 20190861	2.4	22

210	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	5.7	16
209	A parameterized level set method combined with polygonal finite elements in topology optimization. *Structural and Multidisciplinary Optimization*, **2020**, 61, 1913-1928	3.6	7
208	Topology optimization of tension-only cable nets under finite deformations. *Structural and Multidisciplinary Optimization*, **2020**, 62, 559-579	3.6	2
207	Fractional topology optimization of periodic multi-material viscoelastic microstructures with tailored energy dissipation. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 372, 113307	5.7	9
206	Mixed-mode fatigue crack growth using cohesive zone modeling. *Engineering Fracture Mechanics*, **2020**, 240, 107234	4.2	4
205	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	5.7	11
204	Folding at the Microscale: Enabling Multifunctional 3D Origami-Architected Metamaterials. *Small*, **2020**, 16, e2002229	11	12
203	Topology optimization considering the Drucker–Prager criterion with a surrogate nonlinear elastic constitutive model. *Structural and Multidisciplinary Optimization*, **2020**, 62, 3205-3227	3.6	4
202	Mechanical Metamaterials: Folding at the Microscale: Enabling Multifunctional 3D Origami-Architected Metamaterials (Small 35/2020). *Small*, **2020**, 16, 2070192	11	
201	Big influence of small random imperfections in origami-based metamaterials. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2020**, 476, 20200236	2.4	10
200	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	11.5	61
199	Topology optimization with local stress constraints: a stress aggregation-free approach. *Structural and Multidisciplinary Optimization*, **2020**, 62, 1639-1668	3.6	20
198	Virtual element method (VEM)-based topology optimization: an integrated framework. *Structural and Multidisciplinary Optimization*, **2020**, 62, 1089-1114	3.6	8
197	Numerical recipes for elastodynamic virtual element methods with explicit time integration. *International Journal for Numerical Methods in Engineering*, **2020**, 121, 1-31	2.4	13
196	On nonconvex meshes for elastodynamics using virtual element methods with explicit time integration. *Computer Methods in Applied Mechanics and Engineering*, **2019**, 356, 669-684	5.7	19
195	Invariant and smooth limit of discrete geometry folded from bistable origami leading to multistable metasurfaces. *Nature Communications*, **2019**, 10, 4238	17.4	28
194	Tensegrity topology optimization by force maximization on arbitrary ground structures. *Structural and Multidisciplinary Optimization*, **2019**, 59, 2041-2062	3.6	16
193	Reliability-based topology optimization by ground structure method employing a discrete filtering technique. *Structural and Multidisciplinary Optimization*, **2019**, 60, 1035-1058	3.6	8

192	Unraveling tensegrity tessellations for metamaterials with tunable stiffness and bandgaps. *Journal of the Mechanics and Physics of Solids*, **2019**, 131, 147-166	5	22
191	Geometric Mechanics of Origami Patterns Exhibiting Poisson's Ratio Switch by Breaking Mountain and Valley Assignment. *Physical Review Letters*, **2019**, 122, 155501	7.4	37
190	Fractional calculus derivation of a rate-dependent PPR-based cohesive fracture model: theory, implementation, and numerical results. *International Journal of Fracture*, **2019**, 216, 1-29	2.3	11
189	On structural topology optimization considering material nonlinearity: Plane strain versus plane stress solutions. *Advances in Engineering Software*, **2019**, 131, 217-231	3.6	6
188	Material nonlinear topology optimization considering the von Mises criterion through an asymptotic approach: Max strain energy and max load factor formulations. *International Journal for Numerical Methods in Engineering*, **2019**, 118, 804-828	2.4	8
187	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	5.7	23
186	Auxetic structure design using compliant mechanisms: A topology optimization approach with polygonal finite elements. *Advances in Engineering Software*, **2019**, 129, 69-80	3.6	24
185	Deployable Sandwich Surfaces with High Out-of-Plane Stiffness. *Journal of Structural Engineering*, **2019**, 145, 04018244	3	8
184	Achieving pervasive fracture and fragmentation in three-dimensions: an unstructuring-based approach. *International Journal of Fracture*, **2018**, 210, 113-136	2.3	4
183	Multi-material continuum topology optimization with arbitrary volume and mass constraints. *Computer Methods in Applied Mechanics and Engineering*, **2018**, 340, 798-823	5.7	36
182	Design of complex bone internal structure using topology optimization with perimeter control. *Computers in Biology and Medicine*, **2018**, 94, 74-84	7	29
181	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	46
180	Closure to "Macroelement and Macropatch Approaches to Structural Topology Optimization Using the Ground Structure Method" by Xiaojia Zhang, Sushant Maheshwari, Adeildo S. Ramos Jr., and Glaucio H. Paulino. *Journal of Structural Engineering*, **2018**, 144, 07018009	3	
179	Co-rotational 3D beam element for nonlinear dynamic analysis of risers manufactured with functionally graded materials (FGMs). *Engineering Structures*, **2018**, 173, 283-299	4.7	9
178	An efficient mixed-mode rate-dependent cohesive fracture model using sigmoidal functions. *Engineering Fracture Mechanics*, **2018**, 192, 307-327	4.2	15
177	Multimaterial topology optimization with multiple volume constraints: Combining the ZPR update with a ground-structure algorithm to select a single material per overlapping set. *International Journal for Numerical Methods in Engineering*, **2018**, 114, 1053-1073	2.4	14
176	Form-finding of grid-shells using the ground structure and potential energy methods: a comparative study and assessment. *Structural and Multidisciplinary Optimization*, **2018**, 57, 1187-1211	3.6	10
175	Simulation of hydraulic fracturing processes in rocks by coupling the lattice Boltzmann model and the Park-Paulino-Roesler potential-based cohesive zone model. *International Journal of Rock Mechanics and Minings Sciences*, **2018**, 112, 339-353	6	5

174	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	11.5	50
173	PolyMat: an efficient Matlab code for multi-material topology optimization. *Structural and Multidisciplinary Optimization*, **2018**, 58, 2727-2759	3.6	29
172	3D printing of complex origami assemblages for reconfigurable structures. *Soft Matter*, **2018**, 14, 8051-8059	3.6	36
171	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	5	37
170	Material nonlinear topology optimization using the ground structure method with a discrete filtering scheme. *Structural and Multidisciplinary Optimization*, **2017**, 55, 2045-2072	3.6	31
169	Bar and hinge models for scalable analysis of origami. *International Journal of Solids and Structures*, **2017**, 124, 26-45	3.1	100
168	Inverse Estimation of Cohesive Fracture Properties of Asphalt Mixtures Using an Optimization Approach. *Experimental Mechanics*, **2017**, 57, 637-648	2.6	11
167	Nonlinear mechanics of non-rigid origami: an efficient computational approach. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2017**, 473, 20170348	2.4	74
166	A maximum filter for the ground structure method: An optimization tool to harness multiple structural designs. *Engineering Structures*, **2017**, 151, 235-252	4.7	10
165	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	5.7	23
164	Programmable Deployment of Tensegrity Structures by Stimulus-Responsive Polymers. *Scientific Reports*, **2017**, 7, 3511	4.9	53
163	Bridging topology optimization and additive manufacturing. *Structural and Multidisciplinary Optimization*, **2016**, 53, 175-192	3.6	253
162	Assessment of cohesive traction-separation relationships in ABAQUS: A comparative study. *Mechanics Research Communications*, **2016**, 78, 71-78	2.2	47
161	On variational formulations with rigid-body constraints for finite elasticity: Applications to 2D and 3D finite element simulations. *Mechanics Research Communications*, **2016**, 78, 15-26	2.2	
160	Filtering structures out of ground structures – a discrete filtering tool for structural design optimization. *Structural and Multidisciplinary Optimization*, **2016**, 54, 95-116	3.6	17
159	Macroelement and Macropatch Approaches to Structural Topology Optimization Using the Ground Structure Method. *Journal of Structural Engineering*, **2016**, 142, 04016090	3	14
158	A study on the thermodynamic consistency of the Park–Paulino–Roesler (PPR) cohesive fracture model. *Mechanics Research Communications*, **2016**, 78, 100-109	2.2	27
157	Massively parallel adaptive mesh refinement and coarsening for dynamic fracture simulations. *Engineering With Computers*, **2016**, 32, 533-552	4.5	6

156	Origami tubes with reconfigurable polygonal cross-sections. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2016**, 472, 20150607	2.4	41
155	A variational formulation with rigid-body constraints for finite elasticity: theory, finite element implementation, and applications. *Computational Mechanics*, **2016**, 57, 325-338	4	8
154	Designing patient-specific 3D printed craniofacial implants using a novel topology optimization method. *Medical and Biological Engineering and Computing*, **2016**, 54, 1123-35	3.1	64
153	Forward and Inverse Analysis of Concrete Fracture Using the Disk-Shaped Compact Tension Test. *Journal of Testing and Evaluation*, **2016**, 44, 20140312	1	9
152	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	14
151	Polygonal multiresolution topology optimization (PolyMTOP) for structural dynamics. *Structural and Multidisciplinary Optimization*, **2016**, 53, 673-694	3.6	28
150	Structural topology optimization under constraints on instantaneous failure probability. *Structural and Multidisciplinary Optimization*, **2016**, 53, 773-799	3.6	18
149	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	5.7	23
148	Fluid flow topology optimization in PolyTop: stability and computational implementation. *Structural and Multidisciplinary Optimization*, **2016**, 54, 1345-1364	3.6	28
147	Topology optimization with manufacturing constraints: A unified projection-based approach. *Advances in Engineering Software*, **2016**, 100, 97-112	3.6	77
146	Convex topology optimization for hyperelastic trusses based on the ground-structure approach. *Structural and Multidisciplinary Optimization*, **2015**, 51, 287-304	3.6	29
145	A closer look at consistent operator splitting and its extensions for topology optimization. *Computer Methods in Applied Mechanics and Engineering*, **2015**, 283, 573-598	5.7	1
144	Topology optimization using polytopes. *Computer Methods in Applied Mechanics and Engineering*, **2015**, 293, 411-430	5.7	51
143	Bridging art and engineering using Escher-based virtual elements. *Structural and Multidisciplinary Optimization*, **2015**, 51, 867-883	3.6	26
142	On small deformation interfacial debonding in composite materials containing multi-coated particles. *Journal of Composite Materials*, **2015**, 49, 3439-3455	2.7	11
141	Parameter sensitivity of system reliability using sequential compounding method. *Structural Safety*, **2015**, 55, 26-36	4.9	17
140	Computational homogenization of the debonding of particle reinforced composites: The role of interphases in interfaces. *Computational Materials Science*, **2015**, 109, 209-224	3.2	40
139	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, 12321-6	11.5	306

138	Integrated Discrete/Continuum Topology Optimization Framework for Stiffness or Global Stability of High-Rise Buildings. *Journal of Structural Engineering*, **2015**, 141, 04014207	3	11
137	Global sensitivity analysis in the identification of cohesive models using full-field kinematic data. *International Journal of Solids and Structures*, **2015**, 55, 66-78	3.1	33
136	GRAND3 – Ground structure based topology optimization for arbitrary 3D domains using MATLAB. *Structural and Multidisciplinary Optimization*, **2015**, 52, 1161-1184	3.6	67
135	Mapping Cohesive Fracture and Fragmentation Simulations to Graphics Processor Units. *International Journal for Numerical Methods in Engineering*, **2015**, 103, 859-893	2.4	5
134	Gradient correction for polygonal and polyhedral finite elements. *International Journal for Numerical Methods in Engineering*, **2015**, 102, 728-747	2.4	32
133	PolyTop++: an efficient alternative for serial and parallel topology optimization on CPUs & GPUs. *Structural and Multidisciplinary Optimization*, **2015**, 52, 845-859	3.6	19
132	Unraveling metamaterial properties in zigzag-base folded sheets. *Science Advances*, **2015**, 1, e1500224	14.3	126
131	Connecting architecture and engineering through structural topology optimization. *Engineering Structures*, **2014**, 59, 716-726	4.7	97
130	An object-oriented framework for finite element analysis based on a compact topological data structure. *Advances in Engineering Software*, **2014**, 68, 40-48	3.6	9
129	A growing library of three-dimensional cohesive elements for use in ABAQUS. *Engineering Fracture Mechanics*, **2014**, 126, 190-216	4.2	53
128	Unstructured polygonal meshes with adaptive refinement for the numerical simulation of dynamic cohesive fracture. *International Journal of Fracture*, **2014**, 189, 33-57	2.3	40
127	GRAND – Ground structure based topology optimization for arbitrary 2D domains using MATLAB. *Structural and Multidisciplinary Optimization*, **2014**, 50, 861-882	3.6	68
126	Implementation and verification of the Park–Paulino–Roesler cohesive zone model in 3D. *Engineering Fracture Mechanics*, **2014**, 120, 26-42	4.2	19
125	Polygonal finite elements for incompressible fluid flow. *International Journal for Numerical Methods in Fluids*, **2014**, 74, 134-151	1.9	54
124	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	5.7	233
123	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	3.5	51
122	Geometrical Aspects of Lateral Bracing Systems: Where Should the Optimal Bracing Point Be?. *Journal of Structural Engineering*, **2014**, 140, 04014063	3	6
121	Maximizing phononic band gaps in piezocomposite materials by means of topology optimization. *Journal of the Acoustical Society of America*, **2014**, 136, 494-501	2.2	32

120	On the effect of constraint parameters on the generalized displacement control method. *Mechanics Research Communications*, **2014**, 56, 123-129	2.2	23
119	A critical comparative assessment of differential equation-driven methods for structural topology optimization. *Structural and Multidisciplinary Optimization*, **2013**, 48, 685-710	3.6	33
118	Toward GPU accelerated topology optimization on unstructured meshes. *Structural and Multidisciplinary Optimization*, **2013**, 48, 473-485	3.6	32
117	Truss layout optimization within a continuum. *Structural and Multidisciplinary Optimization*, **2013**, 48, 1-16	3.6	21
116	Scalable parallel dynamic fracture simulation using an extrinsic cohesive zone model. *Computer Methods in Applied Mechanics and Engineering*, **2013**, 266, 144-161	5.7	9
115	An operator splitting algorithm for Tikhonov-regularized topology optimization. *Computer Methods in Applied Mechanics and Engineering*, **2013**, 253, 599-608	5.7	12
114	IlliTC low-temperature cracking model for asphalt pavements. *Road Materials and Pavement Design*, **2013**, 14, 57-78	2.6	32
113	Viscoelastic functionally graded finite element method with recursive time integration and applications to flexible pavements. *International Journal for Numerical and Analytical Methods in Geomechanics*, **2012**, 36, 1194-1219	4	7
112	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	160
111	PolyMesher: a general-purpose mesh generator for polygonal elements written in Matlab. *Structural and Multidisciplinary Optimization*, **2012**, 45, 309-328	3.6	328
110	Computational implementation of the PPR potential-based cohesive model in ABAQUS: Educational perspective. *Engineering Fracture Mechanics*, **2012**, 93, 239-262	4.2	140
109	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	35
108	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	3.4	44
107	Adaptive mesh refinement and coarsening for cohesive zone modeling of dynamic fracture. *International Journal for Numerical Methods in Engineering*, **2012**, 92, 1-35	2.4	54
106	Improving multiresolution topology optimization via multiple discretizations. *International Journal for Numerical Methods in Engineering*, **2012**, 92, 507-530	2.4	65
105	Cohesive Zone Models: A Critical Review of Traction-Separation Relationships Across Fracture Surfaces. *Applied Mechanics Reviews*, **2011**, 64,	8.6	379
104	Geometric nonlinear analyses of functionally graded beams using a tailored Lagrangian formulation. *Mechanics Research Communications*, **2011**, 38, 553-559	2.2	25
103	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	2.3	29

102	On the enhancement of bond toughness for Al/epoxy T-peel joints with laser treated substrates. *International Journal of Fracture*, **2011**, 171, 139-150	2.3	32
101	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	82
100	Single-loop system reliability-based topology optimization considering statistical dependence between limit-states. *Structural and Multidisciplinary Optimization*, **2011**, 44, 593-611	3.6	52
99	Direct Extraction of Cohesive Fracture Properties from Digital Image Correlation: A Hybrid Inverse Technique. *Experimental Mechanics*, **2011**, 51, 143-163	2.6	86
98	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	8.6	41
97	Simulation of debonding in Al/epoxy T-peel joints using a potential-based cohesive zone model. *Procedia Engineering*, **2011**, 10, 1760-1765		13
96	Finite Particle Method for Progressive Failure Simulation of Truss Structures. *Journal of Structural Engineering*, **2011**, 137, 1168-1181	3	31
95	A Unified Library of Nonlinear Solution Schemes. *Applied Mechanics Reviews*, **2011**, 64,	8.6	39
94	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,	3	56
93	Inverse computation of cohesive fracture properties from displacement fields. *Inverse Problems in Science and Engineering*, **2010**, 18, 1103-1128	1.3	11
92	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, 13222-7	11.5	68
91	A computational paradigm for multiresolution topology optimization (MTOP). *Structural and Multidisciplinary Optimization*, **2010**, 41, 525-539	3.6	124
90	Layout and material gradation in topology optimization of functionally graded structures: a global□ocal approach. *Structural and Multidisciplinary Optimization*, **2010**, 42, 855-868	3.6	46
89	Recycling Krylov subspaces for efficient large-scale electrical impedance tomography. *Computer Methods in Applied Mechanics and Engineering*, **2010**, 199, 3101-3110	5.7	19
88	Polygonal finite elements for topology optimization: A unifying paradigm. *International Journal for Numerical Methods in Engineering*, **2010**, 82, 671-698	2.4	116
87	Adaptive dynamic cohesive fracture simulation using nodal perturbation and edge-swap operators. *International Journal for Numerical Methods in Engineering*, **2010**, 84, 1303-1343	2.4	34
86	Dependence of crack tip singularity on loading functions. *Mechanics Research Communications*, **2010**, 37, 191-197	2.2	2
85	On the constitutive relation of materials with microstructure using a potential-based cohesive model for interface interaction. *Engineering Fracture Mechanics*, **2010**, 77, 1153-1174	4.2	22

84	Cohesive fracture model for functionally graded fiber reinforced concrete. *Cement and Concrete Research*, **2010**, 40, 956-965	10.3	107
83	Multi-actuated functionally graded piezoelectric micro-tools design: A multiphysics topology optimization approach. *International Journal for Numerical Methods in Engineering*, **2009**, 77, 301-336	2.4	61
82	Integration of singular enrichment functions in the generalized/extended finite element method for three-dimensional problems. *International Journal for Numerical Methods in Engineering*, **2009**, 78, 1220-1257	2.4	66
81	Mode I fracture of adhesive joints using tailored cohesive zone models. *International Journal of Fracture*, **2009**, 157, 193-204	2.3	78
80	A modified Q4/Q4 element for topology optimization. *Structural and Multidisciplinary Optimization*, **2009**, 37, 255-264	3.6	41
79	Honeycomb Wachspress finite elements for structural topology optimization. *Structural and Multidisciplinary Optimization*, **2009**, 37, 569-583	3.6	53
78	Optimal design of periodic functionally graded composites with prescribed properties. *Structural and Multidisciplinary Optimization*, **2009**, 38, 469-489	3.6	44
77	A simple and effective inverse projection scheme for void distribution control in topology optimization. *Structural and Multidisciplinary Optimization*, **2009**, 39, 359-371	3.6	32
76	ParTopS: compact topological framework for parallel fragmentation simulations. *Engineering With Computers*, **2009**, 25, 345-365	4.5	12
75	A unified potential-based cohesive model of mixed-mode fracture. *Journal of the Mechanics and Physics of Solids*, **2009**, 57, 891-908	5	303
74	5 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	33
73	Gradient Elasticity Theory for Mode III Fracture in Functionally Graded MaterialsPart II: Crack Parallel to the Material Gradation. *Journal of Applied Mechanics, Transactions ASME*, **2008**, 75,	2.7	23
72	Assessment of Existing Micro-mechanical Models for Asphalt Mastics Considering Viscoelastic Effects. *Road Materials and Pavement Design*, **2008**, 9, 31-57	2.6	70
71	Effective Thermal Conductivity of Functionally Graded Particulate Nanocomposites With Interfacial Thermal Resistance. *Journal of Applied Mechanics, Transactions ASME*, **2008**, 75,	2.7	22
70	Large Scale Topology Optimization Using Preconditioned Krylov Subspace Recycling and Continuous Approximation of Material Distribution. *AIP Conference Proceedings*, **2008**,	0	1
69	Virtual Internal Pair-Bond Model for Quasi-Brittle Materials. *Journal of Engineering Mechanics - ASCE*, **2008**, 134, 856-866	2.4	9
68	Topology Optimization with Stress Constraints: Reduction of Stress Concentration in Functionally Graded Structures. *AIP Conference Proceedings*, **2008**,	0	1
67	Influence of the Cohesive Zone Model Shape Parameter on Asphalt Concrete Fracture Behavior. *AIP Conference Proceedings*, **2008**,	0	16

66	An explicit elastic solution for a brittle film with periodic cracks. *International Journal of Fracture*, **2008**, 153, 39-52	2.3	37
65	A general topology-based framework for adaptive insertion of cohesive elements in finite element meshes. *Engineering With Computers*, **2008**, 24, 59-78	4.5	51
64	Determination of the kink point in the bilinear softening model for concrete. *Engineering Fracture Mechanics*, **2008**, 75, 3806-3818	4.2	68
63	Using Rheology to Achieve Co-Extrusion of Cement-Based Materials with Graded Cellular Structures. *International Journal of Applied Ceramic Technology*, **2008**, 5, 513-521	2	5
62	Large-scale topology optimization using preconditioned Krylov subspace methods with recycling. *International Journal for Numerical Methods in Engineering*, **2007**, 69, 2441-2468	2.4	125
61	Extrinsic cohesive modelling of dynamic fracture and microbranching instability in brittle materials. *International Journal for Numerical Methods in Engineering*, **2007**, 72, 893-923	2.4	102
60	Wave propagation and dynamic analysis of smoothly graded heterogeneous continua using graded finite elements. *International Journal of Solids and Structures*, **2007**, 44, 3601-3626	3.1	43
59	Concrete fracture prediction using bilinear softening. *Cement and Concrete Composites*, **2007**, 29, 300-312	2.6	149
58	Constitutive behaviors of composites with interface debonding: the extended Mori–Tanaka method for uniaxial tension. *International Journal of Fracture*, **2007**, 146, 139-148	2.3	25
57	On Fracture Criteria for Mixed-Mode Crack Propagation in Functionally Graded Materials. *Mechanics of Advanced Materials and Structures*, **2007**, 14, 227-244	1.8	50
56	The weak patch test for nonhomogeneous materials modeled with graded finite elements. *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, **2007**, 29, 63-81	2	12
55	The simple boundary element method for multiple cracks in functionally graded media governed by potential theory: a three-dimensional Galerkin approach. *International Journal for Numerical Methods in Engineering*, **2006**, 65, 2007-2034	2.4	8
54	Optimization of material distribution in functionally graded structures with stress constraints. *Communications in Numerical Methods in Engineering*, **2006**, 23, 535-551		25
53	Change of Constitutive Relations due to Interaction Between Strain-Gradient Effect and Material Gradation. *Journal of Applied Mechanics, Transactions ASME*, **2006**, 73, 871-875	2.7	5
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