Yi Min Xie

List of Publications by Citations

258 papers	11,051 citations	51 h-index	98 g-index
269 ext. papers	13,894 ext. citations	3.8 avg, IF	6.84 L-index

#	Paper	IF	Citations
258	A simple evolutionary procedure for structural optimization. *Computers and Structures*, **1993**, 49, 885-896	4.5	1404
257	Topological design and additive manufacturing of porous metals for bone scaffolds and orthopaedic implants: A review. *Biomaterials*, **2016**, 83, 127-41	15.6	1008
256	Convergent and mesh-independent solutions for the bi-directional evolutionary structural optimization method. *Finite Elements in Analysis and Design*, **2007**, 43, 1039-1049	2.2	416
255	Auxetic metamaterials and structures: a review. *Smart Materials and Structures*, **2018**, 27, 023001	3.4	348
254	Evolutionary structural optimisation (ESO) using a bidirectional algorithm. *Engineering Computations*, **1998**, 15, 1031-1048	1.4	312
253	Bi-directional evolutionary topology optimization of continuum structures with one or multiple materials. *Computational Mechanics*, **2009**, 43, 393-401	4	274
252	A further review of ESO type methods for topology optimization. *Structural and Multidisciplinary Optimization*, **2010**, 41, 671-683	3.6	217
251	Evolutionary structural optimization for dynamic problems. *Computers and Structures*, **1996**, 58, 1067-1073	4.5	184
250	Topological design of microstructures of cellular materials for maximum bulk or shear modulus. *Computational Materials Science*, **2011**, 50, 1861-1870	3.2	170
249	Evolutionary topological optimization of vibrating continuum structures for natural frequencies. *Computers and Structures*, **2010**, 88, 357-364	4.5	154
248	Evolutionary structural optimization for problems with stiffness constraints. *Finite Elements in Analysis and Design*, **1996**, 21, 239-251	2.2	154
247	Shape and topology design for heat conduction by Evolutionary Structural Optimization. *International Journal of Heat and Mass Transfer*, **1999**, 42, 3361-3371	4.9	145
246	Computational efficiency and validation of bi-directional evolutionary structural optimisation. *Computer Methods in Applied Mechanics and Engineering*, **2000**, 189, 559-573	5.7	141
245	Bi-directional Evolutionary Structural Optimization on Advanced Structures and Materials: A Comprehensive Review. *Archives of Computational Methods in Engineering*, **2018**, 25, 437-478	7.8	134
244	Design of lattice structures with controlled anisotropy. *Materials and Design*, **2016**, 93, 443-447	8.1	133
243	Topology optimization of microstructures of cellular materials and composites for macrostructures. *Computational Materials Science*, **2013**, 67, 397-407	3.2	118
242	Evolutionary topology optimization for temperature reduction of heat conducting fields. *International Journal of Heat and Mass Transfer*, **2004**, 47, 5071-5083	4.9	117

241	Topology optimization of functionally graded cellular materials. *Journal of Materials Science*, **2013**, 48, 1503-1510	4.3	109
240	Optimal design and modeling of gyroid-based functionally graded cellular structures for additive manufacturing. *CAD Computer Aided Design*, **2018**, 104, 87-99	2.9	106
239	A simple error estimator and adaptive time stepping procedure for dynamic analysis. *Earthquake Engineering and Structural Dynamics*, **1991**, 20, 871-887	4	100
238	A simple checkerboard suppression algorithm for evolutionary structural optimization. *Structural and Multidisciplinary Optimization*, **2001**, 22, 230-239	3.6	96
237	Concurrent topology optimization of structures and their composite microstructures. *Computers and Structures*, **2014**, 133, 103-110	4.5	90
236	Experiments and parametric studies on 3D metallic auxetic metamaterials with tuneable mechanical properties. *Smart Materials and Structures*, **2015**, 24, 095016	3.4	89
235	Mechanical properties of luffa sponge. *Journal of the Mechanical Behavior of Biomedical Materials*, **2012**, 15, 141-52	4.1	89
234	Design and characterisation of a tuneable 3D buckling-induced auxetic metamaterial. *Materials and Design*, **2018**, 139, 336-342	8.1	87
233	Topology optimization of nonlinear structures under displacement loading. *Engineering Structures*, **2008**, 30, 2057-2068	4.7	85
232	Simple cubic three-dimensional auxetic metamaterials. *Physica Status Solidi (B): Basic Research*, **2014**, 251, 1515-1522	1.3	83
231	Shape optimization of metallic yielding devices for passive mitigation of seismic energy. *Engineering Structures*, **2010**, 32, 2258-2267	4.7	83
230	Energy absorption of thin-walled tubes with pre-folded origami patterns: Numerical simulation and experimental verification. *Thin-Walled Structures*, **2016**, 103, 33-44	4.7	83
229	Optimal design of periodic structures using evolutionary topology optimization. *Structural and Multidisciplinary Optimization*, **2008**, 36, 597-606	3.6	81
228	Auxetic nail: Design and experimental study. *Composite Structures*, **2018**, 184, 288-298	5.3	77
227	Evolutionary structural optimisation using an additive algorithm. *Finite Elements in Analysis and Design*, **2000**, 34, 291-308	2.2	76
226	Concurrent topology optimization for minimizing frequency responses of two-level hierarchical structures. *Computer Methods in Applied Mechanics and Engineering*, **2016**, 301, 116-136	5.7	73
225	Evolutionary topology optimization of continuum structures with an additional displacement constraint. *Structural and Multidisciplinary Optimization*, **2010**, 40, 409-416	3.6	71
224	Evolutionary topology optimization of periodic composites for extremal magnetic permeability and electrical permittivity. *Structural and Multidisciplinary Optimization*, **2012**, 46, 385-398	3.6	69

223	TOPOLOGY OPTIMIZATION OF STRUCTURES UNDER DYNAMIC RESPONSE CONSTRAINTS. *Journal of Sound and Vibration*, **2000**, 234, 177-189	3.9	67
222	A simple and compact Python code for complex 3D topology optimization. *Advances in Engineering Software*, **2015**, 85, 1-11	3.6	66
221	Topology optimization for microstructures of viscoelastic composite materials. *Computer Methods in Applied Mechanics and Engineering*, **2015**, 283, 503-516	5.7	66
220	A simple auxetic tubular structure with tuneable mechanical properties. *Smart Materials and Structures*, **2016**, 25, 065012	3.4	66
219	Multi-scale design of composite materials and structures for maximum natural frequencies. *Materials & Design*, **2013**, 51, 1023-1034		65
218	Optimal Topology Design of Bracing Systems for Multistory Steel Frames. *Journal of Structural Engineering*, **2000**, 126, 823-829	3	63
217	A numerical model for immiscible two-phase fluid flow in a porous medium and its time domain solution. *International Journal for Numerical Methods in Engineering*, **1990**, 30, 1195-1212	2.4	62
216	A posteriori local error estimation and adaptive time-stepping for newmark integration in dynamic analysis. *Earthquake Engineering and Structural Dynamics*, **1992**, 21, 555-571	4	61
215	Topological optimization for the design of microstructures of isotropic cellular materials. *Engineering Optimization*, **2013**, 45, 1331-1348	2	59
214	THERMOELASTIC TOPOLOGY OPTIMIZATION FOR PROBLEMS WITH VARYING TEMPERATURE FIELDS. *Journal of Thermal Stresses*, **2001**, 24, 347-366	2.2	59
213	Placebo Devices as Effective Control Methods in Acupuncture Clinical Trials: A Systematic Review. *PLoS ONE*, **2015**, 10, e0140825	3.7	58
212	Topology optimization of frequency responses of fluid□tructure interaction systems. *Finite Elements in Analysis and Design*, **2015**, 98, 1-13	2.2	58
211	Evolutionary methods for topology optimisation of continuous structures with design dependent loads. *Computers and Structures*, **2005**, 83, 956-963	4.5	57
210	A new look at ESO and BESO optimization methods. *Structural and Multidisciplinary Optimization*, **2007**, 35, 89-92	3.6	56
209	Designing orthotropic materials for negative or zero compressibility. *International Journal of Solids and Structures*, **2014**, 51, 4038-4051	3.1	55
208	Topology optimization of energy-absorbing structures. *International Journal of Crashworthiness*, **2007**, 12, 663-675	1	51
207	A simple approach to structural frequency optimization. *Computers and Structures*, **1994**, 53, 1487-1491	4.5	51
206	On hybrid cellular materials based on triply periodic minimal surfaces with extreme mechanical properties. *Materials and Design*, **2019**, 183, 108109	8.1	50

205	Behaviour of luffa sponge material under dynamic loading. *International Journal of Impact Engineering*, **2013**, 57, 17-26	4	50
204	On sound insulation of pyramidal lattice sandwich structure. *Composite Structures*, **2019**, 208, 385-394	5.3	50
203	Overview of alliancing research and practice in the construction industry. *Architectural Engineering and Design Management*, **2012**, 8, 103-119	1.2	44
202	Mechanical response of TiAl6V4 lattice structures manufactured by selective laser melting in quasistatic and dynamic compression tests. *Journal of Laser Applications*, **2015**, 27, S17006	2.1	43
201	Comparison of Mechanical Properties and Energy Absorption of Sheet-Based and Strut-Based Gyroid Cellular Structures with Graded Densities. *Materials*, **2019**, 12,	3.5	43
200	Evolutionary topology optimization of continuum structures including design-dependent self-weight loads. *Finite Elements in Analysis and Design*, **2011**, 47, 942-948	2.2	43
199	AN ASSESSMENT OF TIME INTEGRATION SCHEMES FOR NON-LINEAR DYNAMIC EQUATIONS. *Journal of Sound and Vibration*, **1996**, 192, 321-331	3.9	43
198	Tuning the Performance of Metallic Auxetic Metamaterials by Using Buckling and Plasticity. *Materials*, **2016**, 9,	3.5	42
197	Structural topology design with multiple thermal criteria. *Engineering Computations*, **2000**, 17, 715-734	1.4	41
196	Layout optimization of continuum structures considering the probabilistic and fuzzy directional uncertainty of applied loads based on the cloud model. *Structural and Multidisciplinary Optimization* , **2016**, 53, 81-100	3.6	40
195	Underground excavation shape optimization using an evolutionary procedure. *Computers and Geotechnics*, **2005**, 32, 122-132	4.4	40
194	Two-scale optimal design of structures with thermal insulation materials. *Composite Structures*, **2015**, 120, 358-365	5.3	39
193	Topology optimization of compliant mechanisms with desired structural stiffness. *Engineering Structures*, **2014**, 79, 13-21	4.7	39
192	Bridge topology optimisation with stress, displacement and frequency constraints. *Computers and Structures*, **2003**, 81, 131-145	4.5	39
191	A New Algorithm for Bi-Directional Evolutionary Structural Optimization. *JSME International Journal Series C-Mechanical Systems Machine Elements and Manufacturing*, **2006**, 49, 1091-1099		38
190	Concurrent design of composite macrostructure and multi-phase material microstructure for minimum dynamic compliance. *Composite Structures*, **2015**, 128, 221-233	5.3	37
189	Evolutionary topology optimization for natural frequency maximization problems considering acoustic□tructure interaction. *Finite Elements in Analysis and Design*, **2015**, 106, 56-64	2.2	37
188	Optimal topology selection of continuum structures with displacement constraints. *Computers and Structures*, **2000**, 77, 635-644	4.5	35

187	Introduction of fixed grid in evolutionary structural optimisation. *Engineering Computations*, **2000**, 17, 427-439	1.4	35
186	Instability, chaos, and growth and decay of energy of time-stepping schemes for non-linear dynamic equations. *Communications in Numerical Methods in Engineering*, **1994**, 10, 393-401		35
185	Concurrent design of composite macrostructure and cellular microstructure under random excitations. *Composite Structures*, **2015**, 123, 65-77	5.3	34
184	Evolutionary Topology Optimization of Structures with Multiple Displacement and Frequency Constraints. *Advances in Structural Engineering*, **2012**, 15, 359-372	1.9	34
183	Bidirectional Evolutionary Topology Optimization for Structures with Geometrical and Material Nonlinearities. *AIAA Journal*, **2007**, 45, 308-313	2.1	34
182	Design, manufacturing and applications of auxetic tubular structures: A review. *Thin-Walled Structures*, **2021**, 163, 107682	4.7	34
181	Convergence of topological patterns of optimal periodic structures under multiple scales. *Structural and Multidisciplinary Optimization*, **2012**, 46, 41-50	3.6	33
180	Optimisation of columns and frames against buckling. *Computers and Structures*, **2000**, 75, 45-54	4.5	32
179	Topological optimization design of structures under random excitations using SQP method. *Engineering Structures*, **2013**, 56, 2098-2106	4.7	31
178	An evolutionary shape optimization for elastic contact problems subject to multiple load cases. *Computer Methods in Applied Mechanics and Engineering*, **2005**, 194, 3394-3415	5.7	31
177	An improved method for evolutionary structural optimisation against buckling. *Computers and Structures*, **2001**, 79, 253-263	4.5	31
176	Evolutionary structural optimization for stress minimization problems by discrete thickness design. *Computers and Structures*, **2000**, 78, 769-780	4.5	31
175	Multi-objective optimization of multi-cell tubes with origami patterns for energy absorption. *Thin-Walled Structures*, **2018**, 123, 100-113	4.7	31
174	Anisotropic design and optimization of conformal gradient lattice structures. *CAD Computer Aided Design*, **2020**, 119, 102787	2.9	30
173	Inspiration from Nature's body armours □A review of biological and bioinspired composites. *Composites Part B: Engineering*, **2021**, 205, 108513	10	30
172	Topological design of microstructures of multi-phase materials for maximum stiffness or thermal conductivity. *Computational Materials Science*, **2014**, 91, 266-273	3.2	29
171	Multicriteria optimization that minimizes maximum stress and maximizes stiffness. *Computers and Structures*, **2002**, 80, 2433-2448	4.5	29
170	Design optimization and additive manufacturing of nodes in gridshell structures. *Engineering Structures*, **2018**, 160, 161-170	4.7	28

169	Design of 3D orthotropic materials with prescribed ratios for effective Young's moduli. *Computational Materials Science*, **2013**, 67, 229-237	3.2	28
168	Improving efficiency of evolutionary structural optimization by implementing fixed grid mesh. *Structural and Multidisciplinary Optimization*, **2002**, 24, 441-448	3.6	28
167	On the internal architecture of emergent plants. *Journal of the Mechanics and Physics of Solids*, **2018**, 119, 224-239	5	28
166	Re-entrant auxetic lattices with enhanced stiffness: A numerical study. *International Journal of Mechanical Sciences*, **2020**, 178, 105619	5.5	27
165	Design of dimpled tubular structures for energy absorption. *Thin-Walled Structures*, **2017**, 112, 31-40	4.7	26
164	Improving cracking and drying shrinkage properties of cement mortar by adding chemically treated luffa fibres. *Construction and Building Materials*, **2014**, 71, 327-333	6.7	26
163	Concurrent topological design of composite thermoelastic macrostructure and microstructure with multi-phase material for maximum stiffness. *Composite Structures*, **2016**, 150, 84-102	5.3	26
162	Combining genetic algorithms with BESO for topology optimization. *Structural and Multidisciplinary Optimization*, **2009**, 38, 511-523	3.6	25
161	Comparing optimal material microstructures with optimal periodic structures. *Computational Materials Science*, **2013**, 69, 137-147	3.2	23
160	Advantages of Bi-Directional Evolutionary Structural Optimization (BESO) over Evolutionary Structural Optimization (ESO). *Advances in Structural Engineering*, **2007**, 10, 727-737	1.9	23
159	Lattice Ti structures with low rigidity but compatible mechanical strength: Design of implant materials for trabecular bone. *International Journal of Precision Engineering and Manufacturing*, **2016**, 17, 793-799	1.7	22
158	Water-responsive rapid recovery of natural cellular material. *Journal of the Mechanical Behavior of Biomedical Materials*, **2014**, 34, 283-93	4.1	22
157	Evolutionary structural optimisation (ESO) for combined topology and size optimisation of discrete structures. *Computer Methods in Applied Mechanics and Engineering*, **2000**, 188, 743-754	5.7	22
156	A novel type of tubular structure with auxeticity both in radial direction and wall thickness. *Thin-Walled Structures*, **2021**, 163, 107758	4.7	22
155	Optimal Topological Design of Periodic Structures for Natural Frequencies. *Journal of Structural Engineering*, **2011**, 137, 1229-1240	3	21
154	Design of structures for optimal static strength using ESO. *Engineering Failure Analysis*, **2005**, 12, 61-80	3.2	21
153	Maximizing the effective Young's modulus of a composite material by exploiting the Poisson effect. *Composite Structures*, **2016**, 153, 593-600	5.3	21
152	Based on auxetic foam: A novel type of seismic metamaterial for Lamb waves. *Engineering Structures*, **2021**, 246, 112976	4.7	21

151	Evolutionary topology optimization of continuum structures with a global displacement control. *CAD Computer Aided Design*, **2014**, 56, 58-67	2.9	20
150	Design and fabrication of biphasic cellular materials with transport properties □A modified bidirectional evolutionary structural optimization procedure and MATLAB program. *International Journal of Heat and Mass Transfer*, **2012**, 55, 8149-8162	4.9	20
149	A method for varying the number of cavities in an optimized topology using Evolutionary Structural Optimization. *Structural and Multidisciplinary Optimization*, **2000**, 19, 140-147	3.6	20
148	Maximizing stiffness of functionally graded materials with prescribed variation of thermal conductivity. *Computational Materials Science*, **2014**, 82, 457-463	3.2	19
147	Design of fishnet metamaterials with broadband negative refractive index in the visible spectrum. *Optics Letters*, **2014**, 39, 2415-8	3	19
146	Shape and Reinforcement Optimization of Underground Tunnels. *Journal of Computational Science and Technology*, **2010**, 4, 51-63		19
145	Evolutionary shape optimization for stress minimization. *Mechanics Research Communications*, **1999** , 26, 657-664	2.2	19
144	Designing composites with negative linear compressibility. *Materials and Design*, **2017**, 131, 343-357	8.1	18
143	Topology optimization of continuum structures under hybrid additive-subtractive manufacturing constraints. *Structural and Multidisciplinary Optimization*, **2019**, 60, 2571-2595	3.6	18
142	An evolutionary approach to elastic contact optimization of frame structures. *Finite Elements in Analysis and Design*, **2003**, 40, 61-81	2.2	18
141	A novel buckling-restrained brace with auxetic perforated core: Experimental and numerical studies. *Engineering Structures*, **2021**, 249, 113223	4.7	18
140	An Efficient Method for Topology Optimization of Continuum Structures in the Presence of Uncertainty in Loading Direction. *International Journal of Computational Methods*, **2017**, 14, 1750054	1.1	17
139	Simple and effective strategies for achieving diverse and competitive structural designs. *Extreme Mechanics Letters*, **2019**, 30, 100481	3.9	17
138	Stochastic approaches to generating diverse and competitive structural designs in topology optimization. *Finite Elements in Analysis and Design*, **2020**, 173, 103399	2.2	17
137	Two-scale dynamic optimal design of composite structures in the time domain using equivalent static loads. *Composite Structures*, **2016**, 142, 335-345	5.3	17
136	Examination of surface conditions and other physical properties of commonly used stainless steel acupuncture needles. *Acupuncture in Medicine*, **2014**, 32, 146-54	1.9	17
135	Evolutionary natural frequency optimization of two-dimensional structures with additional non-structural lumped masses. *Engineering Computations*, **1997**, 14, 233-251	1.4	17
134	Form finding for complex structures using evolutionary structural optimization method. *Design Studies*, **2005**, 26, 55-72	3.6	17

133	A direct approach to controlling the topology in structural optimization. *Computers and Structures*, **2020**, 227, 106141	4.5	17
132	A novel combined auxetic tubular structure with enhanced tunable stiffness. *Composites Part B: Engineering*, **2021**, 226, 109303	10	17
131	Buckling behavior of nanotubes from diamondene. *Materials and Design*, **2018**, 149, 34-42	8.1	16
130	Topology optimization of binary microstructures involving various non-volume constraints. *Computational Materials Science*, **2018**, 154, 405-425	3.2	16
129	Optimum design of frames with multiple constraints using an evolutionary method. *Computers and Structures*, **2000**, 74, 731-741	4.5	16
128	A novel auxetic chiral lattice composite: Experimental and numerical study. *Composite Structures*, **2022**, 282, 115043	5.3	16
127	Additive manufacturing of specific ankle-foot orthoses for persons after stroke: A preliminary study based on gait analysis data. *Mathematical Biosciences and Engineering*, **2019**, 16, 8134-8143	2.1	16
126	Mechanical properties of foam-filled hexagonal and re-entrant honeycombs under uniaxial compression. *Composite Structures*, **2022**, 280, 114922	5.3	16
125	Robust topology optimization for continuum structures with random loads. *Engineering Computations*, **2018**, 35, 710-732	1.4	15
124	On the shape transformation of cone scales. *Soft Matter*, **2016**, 12, 9797-9802	3.6	15
123	The impact behaviour of plate-like assemblies made of new interlocking bricks: An experimental study. *Materials and Design*, **2017**, 134, 361-373	8.1	15
122	Numerical investigation of compressive behaviour of luffa-filled tubes. *Composites Part B: Engineering*, **2015**, 73, 149-157	10	15
121	Topology Optimization of Composite Structure Using Bi-Directional Evolutionary Structural Optimization Method. *Procedia Engineering*, **2011**, 14, 2980-2985		15
120	AN IMPROVED BI-DIRECTIONAL EVOLUTIONARY TOPOLOGY OPTIMIZATION METHOD FOR FREQUENCIES. *International Journal of Structural Stability and Dynamics*, **2010**, 10, 55-75	1.9	15
119	An evolutionary shape optimization procedure for contact problems in mechanical designs. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, **2003**, 217, 435-446	1.3	15
118	Topology optimization of continuum structures for natural frequencies considering casting constraints. *Engineering Optimization*, **2019**, 51, 941-960	2	15
117	Topology optimization of 3D continuum structures under geometric self-supporting constraint. *Additive Manufacturing*, **2020**, 36, 101422	6.1	14
116	The robust fail-safe topological designs based on the von Mises stress. *Finite Elements in Analysis and Design*, **2020**, 171, 103376	2.2	14

115	Impact of Transaction Attributes on Transaction Costs in Project Alliances: Disaggregated Analysis. *Journal of Management in Engineering - ASCE*, **2015**, 31, 04014054	5.3	13
114	Impact behaviour of plate-like assemblies made of new and existing interlocking bricks: A comparative study. *International Journal of Impact Engineering*, **2018**, 116, 79-93	4	13
113	Morphological optimization of scorpion telson. *Journal of the Mechanics and Physics of Solids*, **2020**, 135, 103773	5	13
112	A new approach to eliminating enclosed voids in topology optimization for additive manufacturing. *Additive Manufacturing*, **2020**, 32, 101006	6.1	13
111	A new node-shifting method for shape optimization of reticulated spatial structures. *Engineering Structures*, **2017**, 152, 727-735	4.7	12
110	Thermal and tensile properties of diamondene at finite temperature: A molecular dynamics study. *Materials and Design*, **2018**, 156, 125-134	8.1	12
109	A maze-like path generation scheme for fused deposition modeling. *International Journal of Advanced Manufacturing Technology*, **2019**, 104, 1509-1519	3.2	12
108	Underground excavation shape optimization considering material nonlinearities. *Computers and Geotechnics*, **2014**, 58, 81-87	4.4	12
107	Explicit formulas for correcting finite-element predictions of natural frequencies. *Communications in Numerical Methods in Engineering*, **1993**, 9, 671-680		12
106	Manufacturing, characteristics and applications of auxetic foams: A state-of-the-art review. *Composites Part B: Engineering*, **2022**, 235, 109733	10	12
105	Systematic review of acupuncture placebo devices with a focus on the credibility of blinding of healthy participants and/or acupuncturists. *Acupuncture in Medicine*, **2018**, 36, 204-214	1.9	11
104	Evolutionary topology optimization of hinge-free compliant mechanisms. *International Journal of Mechanical Sciences*, **2014**, 86, 69-75	5.5	11
103	Optimizing two-level hierarchical particles for thin-film solar cells. *Optics Express*, **2013**, 21 Suppl 2, A285-94	3.5	11
102	Perimeter control in the bidirectional evolutionary optimization method. *Structural and Multidisciplinary Optimization*, **2002**, 24, 430-440	3.6	11
101	Stress based optimization of torsional shafts using an evolutionary procedure. *International Journal of Solids and Structures*, **2001**, 38, 5661-5677	3.1	11
100	Stiffness and inertia multicriteria evolutionary structural optimisation. *Engineering Computations*, **2001**, 18, 1031-1054	1.4	11
99	Static and dynamic properties of a perforated metallic auxetic metamaterial with tunable stiffness and energy absorption. *International Journal of Impact Engineering*, **2022**, 164, 104193	4	11
98	Mechanical properties of foam-filled auxetic circular tubes: Experimental and numerical study. *Thin-Walled Structures*, **2022**, 170, 108584	4.7	11

97	Controlling the maximum first principal stress in topology optimization. *Structural and Multidisciplinary Optimization*, **2021**, 63, 327-339	3.6	11
96	Topology optimization of continuum structures with uncertain-but-bounded parameters for maximum non-probabilistic reliability of frequency requirement. *JVC/Journal of Vibration and Control*, **2017**, 23, 2557-2566	2	10
95	Buckling-induced retraction of spherical shells: A study on the shape of aperture. *Scientific Reports*, **2015**, 5, 11309	4.9	10
94	Dynamic response reliability based topological optimization of continuum structures involving multi-phase materials. *Composite Structures*, **2016**, 149, 134-144	5.3	10
93	Evolutionary thickness design with stiffness maximization and stress minimization criteria. *International Journal for Numerical Methods in Engineering*, **2001**, 52, 979-995	2.4	10
92	Mechanical properties of concrete composites with auxetic single and layered honeycomb structures. *Construction and Building Materials*, **2022**, 322, 126453	6.7	10
91	Evolutionary topology optimization for structures made of multiple materials with different properties in tension and compression. *Composite Structures*, **2021**, 259, 113497	5.3	10
90	A 101-line MATLAB code for topology optimization using binary variables and integer programming. *Structural and Multidisciplinary Optimization*, **2021**, 63, 935-954	3.6	10
89	Optimal design of material microstructure for maximizing damping dissipation velocity of piezoelectric composite beam. *International Journal of Mechanical Sciences*, **2017**, 128-129, 527-540	5.5	9
88	Nonlinear dynamic behavior of a clamped□lamped beam from BNC nanotube impacted by fullerene. *Nonlinear Dynamics*, **2019**, 96, 1133-1145	5	9
87	Mechanical Properties of Additively Manufactured Thermoplastic Polyurethane (TPU) Material Affected by Various Processing Parameters. *Polymers*, **2020**, 12,	4.5	9
86	A Kirigami Approach to Forming a Synthetic Buckliball. *Scientific Reports*, **2016**, 6, 33016	4.9	9
85	Shell buckling: from morphogenesis of soft matter to prospective applications. *Bioinspiration and Biomimetics*, **2018**, 13, 051001	2.6	9
84	Towards ultra-stiff materials: Surface effects on nanoporous materials. *Applied Physics Letters*, **2014** , 105, 101903	3.4	9
83	Determination of an Optimal Topology with a Predefined Number of Cavities. *AIAA Journal*, **2002**, 40, 739-744	2.1	9
82	Numerical simulations of wind drags on straight and twisted polygonal buildings. *Structural Design of Tall and Special Buildings*, **2013**, 22, 62-73	1.8	8
81	A Study on Truss Bolt Mechanism in Controlling Stability of Underground Excavation and Cutter Roof Failure. *Geotechnical and Geological Engineering*, **2013**, 31, 667-682	1.5	8
80	Bi-Directional Evolutionary Structural Optimization for Design of Compliant Mechanisms. *Key Engineering Materials*, **2013**, 535-536, 373-376	0.4	8

79	Optimal topology design of industrial structures using an evolutionary algorithm. *Optimization and Engineering*, **2011**, 12, 681-717	2.1	8
78	Reinventing the Wheel. *Journal of Mechanical Design, Transactions of the ASME*, **2011**, 133,	3	8
77	Design and analysis of an auxetic metamaterial with tuneable stiffness. *Composite Structures*, **2021**, 114997	5.7	8
76	Mechanical behaviour of composite structures made of topologically interlocking concrete bricks with soft interfaces. *Materials and Design*, **2020**, 186, 108347	8.1	8
75	Nanotextures from orthogonal graphene ribbons: Thermal stability evaluation. *Carbon*, **2019**, 144, 81-90	10.4	8
74	Design and mechanical characteristics of auxetic metamaterial with tunable stiffness. *International Journal of Mechanical Sciences*, **2022**, 223, 107286	5.5	8
73	Design of Hierarchical Structures for Synchronized Deformations. *Scientific Reports*, **2017**, 7, 41183	4.9	7
72	Topological optimization of continuum structures for additive manufacturing considering thin feature and support structure constraints. *Engineering Optimization*, **2020**, 1-22	2	7
71	Evolutionary Structural Topology Optimization for Continuum Structures with Structural Size and Topology Variables. *Advances in Structural Engineering*, **2007**, 10, 681-695	1.9	7
70	Conceptual design of buildings subjected to wind load by using topology optimization. *Wind and Structures, an International Journal*, **2014**, 18, 21-35		7
69	High-speed spinning disks on flexible threads. *Scientific Reports*, **2017**, 7, 13111	4.9	6
68	Concurrent topological design of composite structures and materials containing multiple phases of distinct Poisson's ratios. *Engineering Optimization*, **2018**, 50, 599-614	2	6
67	Softening to hardening of stretched diamondene nanotubes. *Physical Chemistry Chemical Physics*, **2018**, 20, 21136-21143	3.6	6
66	Application of Topological Optimisation Technology to Bridge Design. *Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE)*, **2014**, 24, 185-191	1	6
65	Maximizing the effective stiffness of laminate composite materials. *Computational Materials Science*, **2014**, 83, 57-63	3.2	6
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