Jihong Zhu

List of Publications by Year
in descending order

98 papers	4,010 citations	147726 31 h-index	123376 61 g-index
98 all docs	98 docs citations	98 times ranked	1871 citing authors

#	Article	IF	Citations
1	Material-structure-performance integrated laser-metal additive manufacturing. Science, 2021, 372, .	6.0	594
2	Topology Optimization in Aircraft and Aerospace Structures Design. Archives of Computational Methods in Engineering, 2016, 23, 595-622.	6.0	564
3	A review of topology optimization for additive manufacturing: Status and challenges. Chinese Journal of Aeronautics, 2021, 34, 91-110.	2.8	316
4	From Topology Optimization Design to Additive Manufacturing: Todayâ€™s Success and Tomorrowâ€™s Roadmap. Archives of Computational Methods in Engineering, 2020, 27, 805-830.	6.0	206
5	Integrated layout design of multiâ€component system. International Journal for Numerical Methods in Engineering, 2009, 78, 631-651.	1.5	117
6	Feature-driven topology optimization method with signed distance function. Computer Methods in Applied Mechanics and Engineering, 2016, 310, 1-32.	3.4	115
7	Topology optimization of heat conduction problem involving design-dependent heat load effect. Finite Elements in Analysis and Design, 2008, 44, 805-813.	1.7	112
8	A review on the design of laminated composite structures: constant and variable stiffness design and topology optimization. Advanced Composites and Hybrid Materials, 2018, 1, 460-477.	9.9	108
9	Stress constrained shape and topology optimization with fixed mesh: A B-spline finite cell method combined with level set function. Computer Methods in Applied Mechanics and Engineering, 2014, 278, 361-387.	3.4	88
10	Concurrent topology optimization design of structures and non-uniform parameterized lattice microstructures. Structural and Multidisciplinary Optimization, 2018, 58, 35-50.	1.7	78
11	Simultaneous design of components layout and supporting structures using coupled shape and topology optimization technique. Structural and Multidisciplinary Optimization, 2008, 36, 29-41.	1.7	77
12	Integrated layout design of supports and structures. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 557-569.	3.4	70
13	Concurrent design of hierarchical structures with three-dimensional parameterized lattice microstructures for additive manufacturing. Structural and Multidisciplinary Optimization, 2020, 61, 869-894.	1.7	70
14	A comprehensive study of feature definitions with solids and voids for topology optimization. Computer Methods in Applied Mechanics and Engineering, 2017, 325, 289-313.	3.4	63
15	An implicit model for the integrated optimization of component layout and structure topology. Computer Methods in Applied Mechanics and Engineering, 2013, 257, 87-102.	3.4	60
16	Integrated layout design of multi-component systems using XFEM and analytical sensitivity analysis. Computer Methods in Applied Mechanics and Engineering, 2012, 245-246, 75-89.	3.4	58
17	Bi-Directional Evolutionary Topology Optimization Using Element Replaceable Method. Computational Mechanics, 2007, 40, 97-109.	2.2	56
18	Some Recent Advances in the Integrated Layout Design of Multicomponent Systems. Journal of Mechanical Design, Transactions of the ASME, 2011, 133, .	1.7	48

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19	Structural design of aircraft skin stretch-forming die using topology optimization. Journal of Computational and Applied Mathematics, 2013, 246, 278-288.	1.1	48
20	On the multi-component layout design with inertial force. Journal of Computational and Applied Mathematics, 2010, 234, 2222-2230.	1.1	47
21	Maximization of structural natural frequency with optimal support layout. Structural and Multidisciplinary Optimization, 2006, 31, 462-469.	1.7	45
22	Topology optimization design of nanofluid-cooled microchannel heat sink with temperature-dependent fluid properties. Applied Thermal Engineering, 2020, 176, 115354.	3.0	44
23	Multi-scale design and optimization for solid-lattice hybrid structures and their application to aerospace vehicle components. Chinese Journal of Aeronautics, 2021, 34, 386-398.	2.8	44
24	Layout optimization of multi-component structures under static loads and random excitations. Engineering Structures, 2012, 43, 120-128.	2.6	41
25	Experimental validation of 3D printed material behaviors and their influence on the structural topology design. Computational Mechanics, 2018, 61, 581-598.	2.2	41
26	Additive manufacturing-driven design optimization: Building direction and structural topology. Additive Manufacturing, 2020, 36, 101406.	1.7	36
27	An improved adaptive constraint aggregation for integrated layout and topology optimization. Computer Methods in Applied Mechanics and Engineering, 2015, 289, 387-408.	3.4	34
28	Functionally graded materials from topology optimisation and stereolithography. European Polymer Journal, 2018, 108, 199-211.	2.6	34
29	A new data-driven topology optimization framework for structural optimization. Computers and Structures, 2020, 239, 106310.	2.4	34
30	A Multi-point constraints based integrated layout and topology optimization design of multi-component systems. Structural and Multidisciplinary Optimization, 2015, 51, 397-407.	1.7	33
31	Integrated optimization of actuators and structural topology of piezoelectric composite structures for static shape control. Computer Methods in Applied Mechanics and Engineering, 2018, 334, 440-469.	3.4	33
32	Structural topology optimization under harmonic base acceleration excitations. Structural and Multidisciplinary Optimization, 2018, 57, 1061-1078.	1.7	33
33	Sensitivity analysis with the modified Heaviside function for the optimal layout design of multi-component systems. Computer Methods in Applied Mechanics and Engineering, 2012, 241-244, 142-154.	3.4	32
34	Microstructural defects induced by stereolithography and related compressive behaviour of polymers. Journal of Materials Processing Technology, 2018, 251, 37-46.	3.1	32
35	Shape preserving design with structural topology optimization. Structural and Multidisciplinary Optimization, 2016, 53, 893-906.	1.7	31
36	A superelement formulation for the efficient layout design of complex multi-component system. Structural and Multidisciplinary Optimization, 2012, 45, 643-655.	1.7	26

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37	Integrated layout and topology optimization design of multi-frame and multi-component fuselage structure systems. Structural and Multidisciplinary Optimization, 2017, 56, 21-45.	1.7	26
38	Integrated optimization design of smart morphing wing for accurate shape control. Chinese Journal of Aeronautics, 2021, 34, 135-147.	2.8	26
39	The lattice structure configuration design for stereolithography investment casting pattern using topology optimization. Rapid Prototyping Journal, 2012, 18, 353-361.	1.6	23
40	Numerical Model and Experimental Validation for Laser Sinterable Semi-Crystalline Polymer: Shrinkage and Warping. Polymers, 2020, 12, 1373.	2.0	21
41	Shape preserving design of geometrically nonlinear structures using topology optimization. Structural and Multidisciplinary Optimization, 2019, 59, 1033-1051.	1.7	20
42	An all-movable rudder designed by thermo-elastic topology optimization and manufactured by additive manufacturing. Computers and Structures, 2021, 243, 106405.	2.4	20
43	Optimal Packing Configuration Design with Finite-Circle Method. Journal of Intelligent and Robotic Systems: Theory and Applications, 2012, 67, 185-199.	2.0	18
44	Note on spatial gradient operators and gradient-based minimum length constraints in SIMP topology optimization. Structural and Multidisciplinary Optimization, 2019, 60, 393-400.	1.7	18
45	Multiscale topology optimization using feature-driven method. Chinese Journal of Aeronautics, 2020, 33, 621-633.	2.8	17
46	Designing Cellular Structures for Additive Manufacturing Using Voronoiâ€“Monte Carlo Approach. Polymers, 2019, 11, 1158.	2.0	16
47	A B-spline multi-parameterization method for multi-material topology optimization of thermoelastic structures. Structural and Multidisciplinary Optimization, 2020, 61, 923-942.	1.7	16
48	Integrated layout and topology optimization design of multi-component systems under harmonic base acceleration excitations. Structural and Multidisciplinary Optimization, 2019, 59, 1053-1073.	1.7	15
49	Topology optimization of joint load control with geometrical nonlinearity. Chinese Journal of Aeronautics, 2020, 33, 372-382.	2.8	15
50	Hierarchical structure optimization with parameterized lattice and multiscale finite element method. Structural and Multidisciplinary Optimization, 2022, 65, 1.	1.7	15
51	Roadmap for Additive Manufacturing: Toward Intellectualization and Industrialization. , 2022, 1, 100014.		15
52	Structural topology optimization with constraints on multi-fastener joint loads. Structural and Multidisciplinary Optimization, 2014, 50, 561-571.	1.7	14
53	An extended stress-based method for orientation angle optimization of laminated composite structures. Acta Mechanica Sinica/Lixue Xuebao, 2011, 27, 977-985.	1.5	13
54	On the Topology Optimization of Elastic Supporting Structures under Thermomechanical Loads. International Journal of Aerospace Engineering, 2016, 2016, 1-12.	0.5	13

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55	Shape optimization of axisymmetric solids with the finite cell method using a fixed grid. Acta Mechanica Sinica/Lixue Xuebao, 2016, 32, 510-524.	1.5	13
56	Shape optimization of 3D curved slots and its application to the squirrel-cage elastic support design. Science China: Physics, Mechanics and Astronomy, 2010, 53, 1895-1900.	2.0	12
57	Stiffeners layout design of thin-walled structures with constraints on multi-fastener joint loads. Chinese Journal of Aeronautics, 2017, 30, 1441-1450.	2.8	12
58	Concurrent shape and topology optimization involving designâ€dependent pressure loads using implicit Bâ€spline curves. International Journal for Numerical Methods in Engineering, 2019, 118, 495-518.	1.5	12
59	Multidisciplinary topology optimization incorporating process-structure-property-performance relationship of additive manufacturing. Structural and Multidisciplinary Optimization, 2021, 63, 2141-2157.	1.7	12
60	Structural topology optimization under stationary random base acceleration excitations. Chinese Journal of Aeronautics, 2019, 32, 1416-1427.	2.8	11
61	Lightweight design of a bolt-flange sealing structure based on topology optimization. Structural and Multidisciplinary Optimization, 2020, 62, 3413-3428.	1.7	11
62	Shape preserving design of thermo-elastic structures considering geometrical nonlinearity. Structural and Multidisciplinary Optimization, 2020, 61, 1787-1804.	1.7	11
63	Structural topology optimization: Extensibility and attainability. Science China Technological Sciences, 2014, 57, 1310-1321.	2.0	10
64	Backbone cup â€“ a structure design competition based on topology optimization and 3D printing. International Journal for Simulation and Multidisciplinary Design Optimization, 2016, 7, A1.	0.6	10
65	A biarc-based shape optimization approach to reduce stress concentration effects. Acta Mechanica Sinica/Lixue Xuebao, 2014, 30, 370-382.	1.5	9
66	A bio-inspired B-Spline Offset Feature for structural topology optimization. Computer Methods in Applied Mechanics and Engineering, 2021, 386, 114081.	3.4	9
67	Structural topology optimization for directional deformation behavior design with the orthotropic artificial weak element method. Structural and Multidisciplinary Optimization, 2018, 57, 1251-1266.	1.7	7
68	Optimal and adaptive lattice design considering process-induced material anisotropy and geometric inaccuracy for additive manufacturing. Structural and Multidisciplinary Optimization, 2022, 65, 1.	1.7	7
69	A moving bounds strategy for the parameterization of geometric design variables in the simultaneous shape optimization of curved shell structures and openings. Finite Elements in Analysis and Design, 2016, 120, 80-91.	1.7	6
70	Integrated batteries layout and structural topology optimization for a solar-powered drone. Chinese Journal of Aeronautics, 2021, 34, 114-123.	2.8	6
71	Thermomechanical modeling of nonlinear internal hysteresis due to incomplete phase transformation in pseudoelastic shape memory alloys. Nonlinear Dynamics, 2021, 103, 1393-1414.	2.7	6
72	Collaborative optimization design of process parameter and structural topology for laser additive manufacturing. Chinese Journal of Aeronautics, 2023, 36, 456-467.	2.8	6

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73	Optimal design of chiral metamaterials with prescribed nonlinear properties. Structural and Multidisciplinary Optimization, 2021, 63, 595-611.	1.7	5
74	Concurrent optimization of sandwich structures lattice core and viscoelastic layers for suppressing resonance response. Structural and Multidisciplinary Optimization, 2021, 64, 1801-1824.	1.7	5
75	Shape preserving topology optimization for structural radar cross section control. Chinese Journal of Aeronautics, 2022, 35, 198-210.	2.8	5
76	On the Topology Optimization Design for the Stereolithography Based Investment Casting Model. Advanced Materials Research, 2010, 139-141, 1464-1467.	0.3	4
77	A MAC based excitation frequency increasing method for structural topology optimization under harmonic excitations. International Journal for Simulation and Multidisciplinary Design Optimization, 2017, 8, A4.	0.6	4
78	Precise output loads control of load-diffusion components with topology optimization. Chinese Journal of Aeronautics, 2020, 33, 933-946.	2.8	4
79	Shape and Topology Optimization for Complicated Engineering Structures. Mathematical Problems in Engineering, 2015, 2015, 1-2.	0.6	3
80	Local mechanical behavior mapping of a biopolymer blend using nanoindentation, finite element computation, and simplex optimization strategy. Journal of Applied Polymer Science, 2017, 134, .	1.3	3
81	Hot Corrosion Behavior of BaLa2Ti3O10 Thermal Barrier Ceramics in V2O5 and Na2SO4 + V2O5 Molten Salts. Coatings, 2019, 9, 351.	1.2	3
82	Radar cross section minimization for step structures using topology optimization. Structural and Multidisciplinary Optimization, 2022, 65, 1.	1.7	3
83	Development of lunar regolith composite and structure via laser-assisted sintering. Frontiers of Mechanical Engineering, 2022, 17, 1.	2.5	3
84	Topology optimization of the multi-fasteners jointed structure considering fatigue constraints. International Journal for Simulation and Multidisciplinary Design Optimization, 2018, 9, A4.	0.6	2
85	Multidisciplinary Optimization of Airborne Radome Using Genetic Algorithm. Lecture Notes in Computer Science, 2009, , 150-158.	1.0	2
86	Buckling Optimization of Perforated Curved Shells. Materials Science Forum, 2011, 697-698, 614-617.	0.3	1
87	Optimal Design of Aero-Engine Stator Structure with Combined Shape and Topology Optimization Method. Materials Science Forum, 0, 697-698, 623-626.	0.3	1
88	Aircraft Skin Stretch-Forming Die Light-Weight Design Using Topology Optimization. Materials Science Forum, 0, 697-698, 600-603.	0.3	1
89	A modeling module for stereolithography based investment casting resin model. , 2011, , .		1
90	Fiber bundle topology optimization of hierarchical microtextures for wetting behavior in Cassie-Baxter mode. Structural and Multidisciplinary Optimization, 2020, 61, 2523-2556.	1.7	1

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91	Topological Design of Three-Dimensional Microstructure Based on Homogenization Effective Method. Materials Science Forum, 2006, 532-533, 705-708.	0.3	0
92	Integrated Optimal Design of Complex Multi-Component System in Three-Dimension. Materials Science Forum, 0, 697-698, 608-613.	0.3	0
93	The Topology Optimization Design for the Stereolithography Based Investment Casting Pattern. Materials Science Forum, 0, 697-698, 604-607.	0.3	0
94	Structural optimization in ESAC: annals 2011. International Journal for Simulation and Multidisciplinary Design Optimization, 2014, 5, A09.	0.6	0
95	A multi-point constraints based layout design of multi-component systems. International Journal for Simulation and Multidisciplinary Design Optimization, 2014, 5, A08.	0.6	0
96	Topology Optimization Design of Spacecraft Antenna Pedestal Structure under Random Excitations. Applied Mechanics and Materials, 2014, 711, 542-545.	0.2	0
97	Comment on â€œOptimal design of chiral metamaterials with prescribed nonlinear propertiesâ€. Structural and Multidisciplinary Optimization, 2021, 63, 613-615.	1.7	0
98	Shape preserving design with topology optimization for structures under harmonic resonance responses. Structural and Multidisciplinary Optimization, 2022, 65, .	1.7	0