Liang Xia

List of Publications by Year in descending order

		218592	265120
43	2,952	26	42
papers	citations	h-index	g-index

44	44	44	1391
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Topology Optimization in Aircraft and Aerospace Structures Design. Archives of Computational Methods in Engineering, 2016, 23, 595-622.	6.0	564
2	Design of materials using topology optimization and energy-based homogenization approach in Matlab. Structural and Multidisciplinary Optimization, 2015, 52, 1229-1241.	1.7	250
3	Concurrent topology optimization design of material and structure within <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si25.gif" display="inline" overflow="scroll"><mml:msup><mml:mrow><mml:mstyle mathvariant="normal"><mml:mi>FE</mml:mi></mml:mstyle></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:ms nonlinear multiscale analysis framework. Computer Methods in Applied Mechanics and Engineering, 2014, 278, 524-542.	3.4	238
4	Bi-directional Evolutionary Structural Optimization on Advanced Structures and Materials: A Comprehensive Review. Archives of Computational Methods in Engineering, 2018, 25, 437-478.	6.0	214
5	Multiscale structural topology optimization with an approximate constitutive model for local material microstructure. Computer Methods in Applied Mechanics and Engineering, 2015, 286, 147-167.	3.4	139
6	Stress-based topology optimization using bi-directional evolutionary structural optimization method. Computer Methods in Applied Mechanics and Engineering, 2018, 333, 356-370.	3.4	135
7	Recent Advances on Topology Optimization of Multiscale Nonlinear Structures. Archives of Computational Methods in Engineering, 2017, 24, 227-249.	6.0	119
8	Topology optimization of hierarchical lattice structures with substructuring. Computer Methods in Applied Mechanics and Engineering, 2019, 345, 602-617.	3.4	112
9	Concurrent topology optimization of multiscale composite structures in Matlab. Structural and Multidisciplinary Optimization, 2019, 60, 2621-2651.	1.7	90
10	Topology optimization for maximizing the fracture resistance of quasi-brittle composites. Computer Methods in Applied Mechanics and Engineering, 2018, 332, 234-254.	3.4	86
11	Evolutionary topology optimization of continuum structures with smooth boundary representation. Structural and Multidisciplinary Optimization, 2018, 57, 2143-2159.	1.7	85
12	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
13	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
14	A reduced multiscale model for nonlinear structural topology optimization. Computer Methods in Applied Mechanics and Engineering, 2014, 280, 117-134.	3.4	57
15	Stable hole nucleation in level set based topology optimization by using the material removal scheme of BESO. Computer Methods in Applied Mechanics and Engineering, 2019, 343, 438-452.	3.4	52
16	Evolutionary topology optimization of continuum structures with stress constraints. Structural and Multidisciplinary Optimization, 2019, 59, 647-658.	1.7	52
17	Topology optimization for heat conduction by combining level set method and BESO method. International Journal of Heat and Mass Transfer, 2018, 127, 200-209.	2.5	50
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

#	Article	IF	Citations
19	Evolutionary topology optimization of elastoplastic structures. Structural and Multidisciplinary Optimization, 2017, 55, 569-581.	1.7	48
20	Topology optimization of multiscale elastoviscoplastic structures. International Journal for Numerical Methods in Engineering, 2016, 106, 430-453.	1.5	47
21	Topology optimization of particleâ€matrix composites for optimal fracture resistance taking into account interfacial damage. International Journal for Numerical Methods in Engineering, 2018, 115, 604-626.	1.5	45
22	Topology optimization of periodic lattice structures taking into account strain gradient. Computers and Structures, 2018, 210, 28-40.	2.4	41
23	Towards simultaneous reduction of both input and output spaces for interactive simulation-based structural design. Computer Methods in Applied Mechanics and Engineering, 2013, 265, 174-185.	3.4	33
24	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
25	An isogeometric approach to topology optimization of spatially graded hierarchical structures. Composite Structures, 2019, 225, 111171.	3.1	31
26	Multi-material topology optimization of piezoelectric composite structures for energy harvesting. Composite Structures, 2021, 265, 113783.	3.1	28
27	A superelement formulation for the efficient layout design of complex multi-component system. Structural and Multidisciplinary Optimization, 2012, 45, 643-655.	1.7	26
28	Numerical material representation using proper orthogonal decomposition and diffuse approximation. Applied Mathematics and Computation, 2013, 224, 450-462.	1.4	26
29	Topology Optimization of Periodic Structures With Substructuring. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, .	1.7	25
30	Data-driven design approach to hierarchical hybrid structures with multiple lattice configurations. Structural and Multidisciplinary Optimization, 2020, 61, 2227-2235.	1.7	25
31	Controlling the maximum first principal stress in topology optimization. Structural and Multidisciplinary Optimization, 2021, 63, 327-339.	1.7	24
32	Optimal Packing Configuration Design with Finite-Circle Method. Journal of Intelligent and Robotic Systems: Theory and Applications, 2012, 67, 185-199.	2.0	18
33	Optimal microstructures of elastoplastic cellular materials under various macroscopic strains. Mechanics of Materials, 2018, 118, 120-132.	1.7	16
34	Topology optimization of thermal actuator and its support using the level set based multipleâ€“type boundary method and sensitivity analysis based on constrained variational principle. Structural and Multidisciplinary Optimization, 2018, 57, 1317-1327.	1.7	16
35	Maximizing the first eigenfrequency of structures subjected to uniform boundary erosion through the level set method. Engineering With Computers, 2019, 35, 21-33.	3.5	12
36	Towards surrogate modeling of material microstructures through the processing variables. Applied Mathematics and Computation, 2017, 294, 157-168.	1.4	11

#	ARTICLE	IF	CITATIONS
37	An evolutionary design approach to shell-infill structures. Additive Manufacturing, 2020, 34, 101382.	1.7	11
38	A biarc-based shape optimization approach to reduce stress concentration effects. Acta Mechanica Sinica/Lixue Xuebao, 2014, 30, 370-382.	1.5	9
39	Design of heterogeneous mesostructures for nonseparated scales and analysis of size effects. International Journal for Numerical Methods in Engineering, 2021, 122, 1333.	1.5	6
40	Design of an aircraft engine bracket using stress-constrained bi-directional evolutionary structural optimization method. Structural and Multidisciplinary Optimization, 2021, 64, 4147-4159.	1.7	5
41	Length scale control schemes for biâ€directional evolutionary structural optimization method. International Journal for Numerical Methods in Engineering, 2022, 123, 755-773.	1.5	5
42	Topology Optimization of Piezoelectric Energy Harvesters for Enhanced Open-Circuit Voltage Subjected to Harmonic Excitations. Materials, 2022, 15, 4423.	1.3	2
43	New Strategies for the Efficient Integrated Layout Design of Multi-component System. Jixie Gongcheng Xuebao/Chinese Journal of Mechanical Engineering, 2011, 47, 135.	0.7	0