

# Xiaojia Shelly Zhang

## List of Publications by Year in Descending Order

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**Version:** 2024-04-28

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

18  
papers

161  
citations

6  
h-index

12  
g-index

18  
ext. papers

255  
ext. citations

4.1  
avg, IF

3.85  
L-index

#	Paper	IF	Citations
18	Digital synthesis of free-form multimaterial structures for realization of arbitrary programmed mechanical responses.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2022</b> , 119, e2120563119	11.5	2
17	Multimaterial stress-constrained topology optimization with multiple distinct yield criteria. <i>Extreme Mechanics Letters</i> , <b>2022</b> , 101716	3.9	0
16	Design of graded porous bone-like structures via a multi-material topology optimization approach. <i>Structural and Multidisciplinary Optimization</i> , <b>2021</b> , 64, 677	3.6	5
15	Topology optimization of hyperelastic structures with anisotropic fiber reinforcement under large deformations. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2021</b> , 378, 113496	5.7	2
14	Momentum-based accelerated mirror descent stochastic approximation for robust topology optimization under stochastic loads. <i>International Journal for Numerical Methods in Engineering</i> , <b>2021</b> , 122, 4431-4457	2.4	3
13	Design of composite structures with programmable elastic responses under finite deformations. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2021</b> , 151, 104356	5	3
12	Additive Manufacturing of Topology-Optimized Graded Porous Structures: An Experimental Study. <i>Jom</i> , <b>2021</b> , 73, 2022-2030	2.1	2
11	Topology optimization of hard-magnetic soft materials. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2021</b> , 158, 104628	5	1
10	Paved guideway topology optimization for pedestrian traffic under Nash equilibrium. <i>Structural and Multidisciplinary Optimization</i> , <b>2021</b> , 63, 1405-1426	3.6	1
9	Efficient multi-material continuum topology optimization considering hyperelasticity: Achieving local feature control through regional constraints. <i>Mechanics Research Communications</i> , <b>2020</b> , 105, 103494	3.2	4
8	Topology Optimization With Many Right-Hand Sides Using Mirror Descent Stochastic Approximation Reduction From Many to a Single Sample. <i>Journal of Applied Mechanics, Transactions ASME</i> , <b>2020</b> , 87,	2.7	3
7	Adaptive multi-material topology optimization with hyperelastic materials under large deformations: A virtual element approach. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2020</b> , 370, 112976	5.7	11
6	Multi-material topology optimization with multiple volume constraints: a general approach applied to ground structures with material nonlinearity. <i>Structural and Multidisciplinary Optimization</i> , <b>2018</b> , 57, 161-182	3.6	46
5	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. <i>Journal of Structural Engineering</i> , <b>2018</b> , 144, 07018009	3	
4	Multimaterial topology optimization with multiple volume constraints: Combining the ZPR update with a ground-structure algorithm to select a single material per overlapping set. <i>International Journal for Numerical Methods in Engineering</i> , <b>2018</b> , 114, 1053-1073	2.4	14
3	Material nonlinear topology optimization using the ground structure method with a discrete filtering scheme. <i>Structural and Multidisciplinary Optimization</i> , <b>2017</b> , 55, 2045-2072	3.6	31
2	Stochastic sampling for deterministic structural topology optimization with many load cases: Density-based and ground structure approaches. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2017</b> , 325, 463-487	5.7	23

1	A comprehensive review of educational articles on structural and multidisciplinary optimization. <i>Structural and Multidisciplinary Optimization</i> ,1	3.6	10
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