Efficient topology optimization in MATLAB using 88 lin

Structural and Multidisciplinary Optimization 43, 1-16

DOI: 10.1007/s00158-010-0594-7

Citation Report

| # | ARTICLE | IF | Citations |
|----|---|-----|-----------|
| 1 | Estimation of the optimal distribution of the fibers in carbon/carbon composite. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 963-964. | 0.2 | 0 |
| 2 | On the usefulness of non-gradient approaches in topology optimization. Structural and Multidisciplinary Optimization, 2011, 43, 589-596. | 1.7 | 317 |
| 3 | Topology design with negative masks using gradient search. Structural and Multidisciplinary Optimization, 2011, 44, 629-649. | 1.7 | 40 |
| 4 | Parallel Control for Structural Dynamic Topological Optimization Problems Based on MMA. Advanced Materials Research, 0, 538-541, 2872-2877. | 0.3 | O |
| 5 | Parallel Topology Optimization of Bi-Material Layout for Vibration Control in Plate Structures. Advanced Materials Research, 0, 538-541, 2586-2593. | 0.3 | 0 |
| 6 | Robust topology design of periodic grating surfaces. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 2935. | 0.9 | 12 |
| 7 | An Adaptive Weighting Strategy for Multi-Load Topology Optimization. , 2012, , . | | 6 |
| 8 | Topology optimization for minimum weight with compliance and stress constraints. Structural and Multidisciplinary Optimization, 2012, 46, 369-384. | 1.7 | 181 |
| 9 | Maximization of the fundamental eigenfrequency of micropolar solids through topology optimization. Structural and Multidisciplinary Optimization, 2012, 46, 549-560. | 1.7 | 23 |
| 10 | Approximation of the critical buckling factor for composite panels. Structural and Multidisciplinary Optimization, 2012, 46, 561-584. | 1.7 | 9 |
| 11 | On the comparison of material interpolation schemes and optimal composite properties in plane shape optimization. Structural and Multidisciplinary Optimization, 2012, 46, 693-710. | 1.7 | 22 |
| 12 | Sensitivity filtering from a continuum mechanics perspective. Structural and Multidisciplinary Optimization, 2012, 46, 471-475. | 1.7 | 63 |
| 13 | Topology optimization with geometric uncertainties by perturbation techniques. International Journal for Numerical Methods in Engineering, 2012, 90, 1321-1336. | 1.5 | 110 |
| 14 | PolyTop: a Matlab implementation of a general topology optimization framework using unstructured polygonal finite element meshes. Structural and Multidisciplinary Optimization, 2012, 45, 329-357. | 1.7 | 214 |
| 15 | PolyMesher: a general-purpose mesh generator for polygonal elements written in Matlab. Structural and Multidisciplinary Optimization, 2012, 45, 309-328. | 1.7 | 457 |
| 16 | Topology optimization using the finite cell method. Optimization and Engineering, 2012, 13, 57-78. | 1.3 | 70 |
| 17 | Combined gradientâ€stochastic optimization with negative circular masks for large deformation topologies. International Journal for Numerical Methods in Engineering, 2013, 93, 635-663. | 1.5 | 7 |
| 18 | Simultaneous design of structural layout and discrete fiber orientation using bi-value coding parameterization and volume constraint. Structural and Multidisciplinary Optimization, 2013, 48, 1075-1088. | 1.7 | 33 |

| # | ARTICLE | IF | Citations |
|----|--|-----|-----------|
| 19 | Density filters for topology optimization based on the Pythagorean means. Structural and Multidisciplinary Optimization, 2013, 48, 859-875. | 1.7 | 60 |
| 20 | Stiffening of restrained thermal structures via topology optimization. Structural and Multidisciplinary Optimization, 2013, 48, 731-745. | 1.7 | 64 |
| 21 | Robust topology optimization accounting for misplacement of material. Structural and Multidisciplinary Optimization, 2013, 47, 317-333. | 1.7 | 61 |
| 22 | Topology optimization approaches. Structural and Multidisciplinary Optimization, 2013, 48, 1031-1055. | 1.7 | 1,851 |
| 23 | Topology optimization of fluid–structure-interaction problems in poroelasticity. Computer Methods in Applied Mechanics and Engineering, 2013, 258, 55-62. | 3.4 | 51 |
| 24 | Comparative analysis of strut-and-tie models using Smooth Evolutionary Structural Optimization. Engineering Structures, 2013, 56, 1665-1675. | 2.6 | 38 |
| 25 | Interactive topology optimization on hand-held devices. Structural and Multidisciplinary Optimization, 2013, 47, 1-6. | 1.7 | 41 |
| 26 | On design of multi-functional microstructural materials. Journal of Materials Science, 2013, 48, 51-66. | 1.7 | 164 |
| 27 | Topology Optimization of Stressed Capacitive RF MEMS Switches. Journal of Microelectromechanical Systems, 2013, 22, 206-215. | 1.7 | 36 |
| 29 | An enhanced aggregation method for topology optimization with local stress constraints. Computer Methods in Applied Mechanics and Engineering, 2013, 254, 31-41. | 3.4 | 116 |
| 30 | Topological design of electromechanical actuators with robustness toward over- and under-etching. Computer Methods in Applied Mechanics and Engineering, 2013, 253, 237-251. | 3.4 | 76 |
| 31 | Topology Optimization of Beam Structures with Various End and Loading Conditions. Applied Mechanics and Materials, 0, 465-466, 22-26. | 0.2 | 0 |
| 32 | Intelligent optimal design of spatial structures. Computers and Structures, 2013, 127, 102-115. | 2.4 | 12 |
| 33 | Formulation for scalable optimization of microcavities via the frequency-averaged local density of states. Optics Express, 2013, 21, 30812. | 1.7 | 83 |
| 34 | Topology optimization with efficient rules of cellular automata. Engineering Computations, 2013, 30, 1086-1106. | 0.7 | 11 |
| 35 | Two-Level Adaptive Algebraic Multigrid for a Sequence of Problems with Slowly Varying Random Coefficients. SIAM Journal of Scientific Computing, 2013, 35, B1215-B1234. | 1.3 | 5 |
| 36 | Adaptive gradient-assisted robust design optimization under interval uncertainty. Engineering Optimization, 2013, 45, 1287-1307. | 1.5 | 18 |
| 37 | Optimization of sensor placement to detect damage in flexible plates. Engineering Optimization, 2013, 45, 659-676. | 1.5 | 32 |

| # | Article | IF | Citations |
|----|--|-----|-----------|
| 38 | Neuro-evolutionary topology optimization of structures by utilizing local state features. , 2014, , . | | 13 |
| 39 | The Influence of Initial Structural Density Value on Results of Multi-Material Topology Optimization Problems. Applied Mechanics and Materials, 2014, 635-637, 223-227. | 0.2 | 0 |
| 40 | Multi-material topology optimization of complaint mechanism using ground structure approach. , 2014, , . | | 1 |
| 41 | Direct gradient projection method with transformation of variables technique for structural topology optimization. Structural and Multidisciplinary Optimization, 2014, 49, 107-119. | 1.7 | 10 |
| 42 | A survey of structural and multidisciplinary continuum topology optimization: post 2000. Structural and Multidisciplinary Optimization, 2014, 49, 1-38. | 1.7 | 980 |
| 43 | On multigrid-CG for efficient topology optimization. Structural and Multidisciplinary Optimization, 2014, 49, 815-829. | 1.7 | 128 |
| 44 | Shape and topology optimization for closed liquid cell materials using extended multiscale finite element method. Structural and Multidisciplinary Optimization, 2014, 49, 367-385. | 1.7 | 11 |
| 45 | Vectorized simulation of groundwater flow and streamline transport. Environmental Modelling and Software, 2014, 52, 207-221. | 1.9 | 15 |
| 46 | How to determine composite material properties using numerical homogenization. Computational Materials Science, 2014, 83, 488-495. | 1.4 | 285 |
| 47 | Robust Topology Optimization of Structures Under Loading Uncertainty. AIAA Journal, 2014, 52, 398-407. | 1.5 | 32 |
| 48 | Finite element analysis of no–tension structures as a topology optimization problem. Structural and Multidisciplinary Optimization, 2014, 50, 957-973. | 1.7 | 28 |
| 49 | Alternating active-phase algorithm for multimaterial topology optimization problems: a 115-line MATLAB implementation. Structural and Multidisciplinary Optimization, 2014, 49, 621-642. | 1.7 | 166 |
| 50 | Design of manufacturable 3D extremal elastic microstructure. Mechanics of Materials, 2014, 69, 1-10. | 1.7 | 258 |
| 51 | An efficient 3D topology optimization code written in Matlab. Structural and Multidisciplinary Optimization, 2014, 50, 1175-1196. | 1.7 | 399 |
| 52 | A Global Heat Compliance Measure Based Topology Optimization for the Transient Heat Conduction Problem. Numerical Heat Transfer, Part B: Fundamentals, 2014, 65, 445-471. | 0.6 | 24 |
| 53 | A Data-Driven Investigation and Estimation of Optimal Topologies under Variable Loading Configurations. Lecture Notes in Computer Science, 2014, , 387-399. | 1.0 | 3 |
| 54 | Optimal topology for additive manufacture: A method for enabling additive manufacture of support-free optimal structures. Materials & Design, 2014, 63, 678-690. | 5.1 | 283 |
| 55 | The gradient projection method for structural topology optimization including density-dependent force. Structural and Multidisciplinary Optimization, 2014, 50, 645-657. | 1.7 | 10 |

| # | Article | IF | Citations |
|----|---|-----|-----------|
| 56 | Multimaterial topology optimization by volume constrained Allen–Cahn system and regularized projected steepest descent method. Computer Methods in Applied Mechanics and Engineering, 2014, 276, 534-565. | 3.4 | 79 |
| 57 | Topology Optimization Using Node-Based Smoothed Finite Element Method. International Journal of Applied Mechanics, 2015, 07, 1550085. | 1.3 | 28 |
| 58 | Predicting the Benefits of Topology Optimization. , 2015, , . | | 3 |
| 59 | Topology Optimization on the Cloud: A Confluence of Technologies. , 2015, , . | | 3 |
| 60 | Proportional Topology Optimization: A New Non-Sensitivity Method for Solving Stress Constrained and Minimum Compliance Problems and Its Implementation in MATLAB. PLoS ONE, 2015, 10, e0145041. | 1.1 | 69 |
| 61 | Benchmarking optimization solvers for structural topology optimization. Structural and Multidisciplinary Optimization, 2015, 52, 527-547. | 1.7 | 80 |
| 62 | PolyTop++: an efficient alternative for serial and parallel topology optimization on CPUs & Description on CPUs Structural and Multidisciplinary Optimization, 2015, 52, 845-859. | 1.7 | 31 |
| 63 | Efficient Design-Optimization of Variable-Density Hexagonal Cellular Structure by Additive Manufacturing: Theory and Validation. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2015, 137, . | 1.3 | 170 |
| 64 | Structure and appearance optimization for controllable shape design. ACM Transactions on Graphics, 2015, 34, 1-11. | 4.9 | 48 |
| 65 | Efficient Filtering in Topology Optimization via B-Splines1. Journal of Mechanical Design, Transactions of the ASME, 2015, 137, . | 1.7 | 12 |
| 66 | B-Spline Based Robust Topology Optimization. , 2015, , . | | 2 |
| 67 | Improving the efficiency of large scale topology optimization through onâ€theâ€fly reduced order model construction. International Journal for Numerical Methods in Engineering, 2015, 101, 281-304. | 1.5 | 42 |
| 68 | Advances in Architectural Geometry 2014. , 2015, , . | | 3 |
| 69 | Advanced Topology Optimization Methods for Conceptual Architectural Design. , 2015, , 159-179. | | 7 |
| 70 | A simple and compact Python code for complex 3D topology optimization. Advances in Engineering Software, 2015, 85, 1-11. | 1.8 | 96 |
| 71 | Multi-objective topology optimization of multi-component continuum structures via a Kriging-interpolated level set approach. Structural and Multidisciplinary Optimization, 2015, 51, 733-748. | 1.7 | 45 |
| 72 | Constraints of distance from boundary to skeleton: For the control of length scale in level set based structural topology optimization. Computer Methods in Applied Mechanics and Engineering, 2015, 295, 525-542. | 3.4 | 84 |
| 73 | Automatic penalty continuation in structural topology optimization. Structural and Multidisciplinary Optimization, 2015, 52, 1205-1221. | 1.7 | 34 |

| # | Article | IF | CITATIONS |
|----|---|-----|-----------|
| 74 | Design of materials using topology optimization and energy-based homogenization approach in Matlab. Structural and Multidisciplinary Optimization, 2015, 52, 1229-1241. | 1.7 | 250 |
| 75 | Topology optimization of compliant mechanisms using pairs of curves. Engineering Optimization, 2015, 47, 1497-1522. | 1.5 | 16 |
| 76 | Neuro-evolutionary Topology Optimization with Adaptive Improvement Threshold. Lecture Notes in Computer Science, 2015, , 655-666. | 1.0 | 4 |
| 77 | Interactive truss design using Particle Swarm Optimization and NURBS curves. Journal of Building Engineering, 2015, 4, 60-74. | 1.6 | 10 |
| 78 | An evolutionary topology optimization method for design of compliant mechanisms with two-dimensional loading. , 2015, , . | | 5 |
| 79 | Multi-constrained topology optimization via the topological sensitivity. Structural and Multidisciplinary Optimization, 2015, 51, 987-1001. | 1.7 | 47 |
| 80 | Matlab code for a level set-based topology optimization method using a reaction diffusion equation. Structural and Multidisciplinary Optimization, 2015, 51, 1159-1172. | 1.7 | 127 |
| 81 | Topological optimization of internal patterns and support in additive manufacturing. Journal of Manufacturing Systems, 2015, 37, 417-425. | 7.6 | 106 |
| 82 | Revisiting approximate reanalysis in topology optimization: on the advantages of recycled preconditioning in a minimum weight procedure. Structural and Multidisciplinary Optimization, 2015, 51, 41-57. | 1.7 | 32 |
| 83 | Robust Topology Optimization: A New Algorithm for Volume-constrained Expected Compliance Minimization with Probabilistic Loading Directions using Exact Analytical Objective and Gradient. Periodica Polytechnica: Civil Engineering, 2016, , . | 0.6 | 1 |
| 84 | Three-dimensional topology optimization for geotechnical foundations in granular soil. Computers and Geotechnics, 2016, 80, 41-48. | 2.3 | 15 |
| 85 | Optimal Linkage Shapes of Planar Mechanisms Using Topology Optimization. , 2016, , . | | 0 |
| 86 | State-based representation for structural topology optimization and application to crashworthiness. , $2016, , .$ | | 17 |
| 87 | Smoothed finite element method for topology optimization involving incompressible materials. Engineering Optimization, 2016, 48, 2064-2089. | 1.5 | 13 |
| 88 | A data-driven investigation and estimation of optimal topologies under variable loading configurations. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2016, 4, 61-72. | 1.3 | 50 |
| 89 | Primal-Dual Interior Point Multigrid Method for Topology Optimization. SIAM Journal of Scientific Computing, 2016, 38, B685-B709. | 1.3 | 9 |
| 90 | Application of Multidisciplinary Systemsâ€ofâ€Systems Optimization to an Aircraft Design Problem. Systems Engineering, 2016, 19, 235-251. | 1.6 | 7 |
| 91 | A Solid Isotropic Material with Parallel Penalization method for structural topology optimization with multiple materials. , 2016, , . | | 5 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 92 | A structural topology design method based on principal stress line. CAD Computer Aided Design, 2016, 80, 19-31. | 1.4 | 44 |
| 93 | liteITD a MATLAB Graphical User Interface (GUI) program for topology design of continuum structures. Advances in Engineering Software, 2016, 100, 126-147. | 1.8 | 15 |
| 94 | A survey of manufacturing oriented topology optimization methods. Advances in Engineering Software, 2016, 100, 161-175. | 1.8 | 242 |
| 95 | A review of synthesis methods for additive manufacturing. Virtual and Physical Prototyping, 2016, 11, 305-317. | 5.3 | 48 |
| 97 | Evolutionary computation for topology optimization of mechanical structures: An overview of representations, , 2016, , . | | 14 |
| 98 | Large scale three-dimensional topology optimisation of heat sinks cooled by natural convection. International Journal of Heat and Mass Transfer, 2016, 100, 876-891. | 2.5 | 214 |
| 99 | Hierarchical design of structures and multiphase material cells. Computers and Structures, 2016, 165, 136-144. | 2.4 | 10 |
| 100 | On the implementation and effectiveness of morphological close-open and open-close filters for topology optimization. Structural and Multidisciplinary Optimization, 2016, 54, 15-21. | 1.7 | 19 |
| 101 | A new topology optimization approach based on Moving Morphable Components (MMC) and the ersatz material model. Structural and Multidisciplinary Optimization, 2016, 53, 1243-1260. | 1.7 | 387 |
| 102 | An efficient approach to reliability-based topology optimization for continua under material uncertainty. Structural and Multidisciplinary Optimization, 2016, 53, 759-772. | 1.7 | 70 |
| 103 | Robust and Reliability-Based Structural Topology Optimization Using a Continuous Adjoint Method. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering, 2016, 2, . | 1.1 | 5 |
| 104 | An efficient second-order SQP method for structural topology optimization. Structural and Multidisciplinary Optimization, 2016, 53, 1315-1333. | 1.7 | 28 |
| 105 | Topology optimization of piezo modal transducers with null-polarity phases. Structural and Multidisciplinary Optimization, 2016, 53, 193-203. | 1.7 | 15 |
| 106 | A level-set based multi-material topology optimization method using a reaction diffusion equation. CAD Computer Aided Design, 2016, 73, 41-52. | 1.4 | 43 |
| 107 | Topology optimization design of 3D electrothermomechanical actuators by using GPU as a co-processor. Computer Methods in Applied Mechanics and Engineering, 2016, 302, 44-69. | 3.4 | 15 |
| 108 | Optimal design of multiphase composites under elastodynamic loading. Computer Methods in Applied Mechanics and Engineering, 2016, 300, 265-293. | 3.4 | 10 |
| 109 | Optimality criteria-based topology optimization of a bi-material model for acoustic–structural coupled systems. Engineering Optimization, 2016, 48, 1060-1079. | 1.5 | 15 |
| 110 | Topology optimization of compliant mechanisms with curvilinear fiber path laminated composites. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2016, 230, 3101-3110. | 1.1 | 8 |

| # | Article | lF | Citations |
|-----|---|-----|-----------|
| 111 | Bridging topology optimization and additive manufacturing. Structural and Multidisciplinary Optimization, 2016, 53, 175-192. | 1.7 | 334 |
| 113 | Optimum core design to improve noise attenuation performance and stiffness of sandwich panels used for high-speed railway vehicles. Structural and Multidisciplinary Optimization, 2017, 55, 723-738. | 1.7 | 5 |
| 114 | Geometry and topology optimization of sheet metal profiles by using a branchâ€andâ€bound framework. Materialwissenschaft Und Werkstofftechnik, 2017, 48, 27-40. | 0.5 | 1 |
| 115 | Abaqus2Matlab: A suitable tool for finite element post-processing. Advances in Engineering Software, 2017, 105, 9-16. | 1.8 | 121 |
| 116 | Maximum length scale in density based topology optimization. Computer Methods in Applied Mechanics and Engineering, 2017, 318, 826-844. | 3.4 | 57 |
| 117 | Topology optimization of laminated composite structures with design-dependent loads. Composite Structures, 2017, 167, 251-261. | 3.1 | 18 |
| 118 | The generation of hierarchic structures via robust 3D topology optimisation. Advanced Engineering Informatics, 2017, 33, 440-455. | 4.0 | 14 |
| 119 | Topology optimization of stiffened plate/shell structures based on adaptive morphogenesis algorithm. Journal of Manufacturing Systems, 2017, 43, 375-384. | 7.6 | 28 |
| 120 | Finding the Best: Mathematical Optimization Based on Product and Process Requirements. , 2017, , 147-200. | | 0 |
| 121 | Identifying experts in the crowd for evaluation of engineering designs. Journal of Engineering Design, 2017, 28, 317-337. | 1.1 | 10 |
| 122 | Optimal design and modeling of variable-density triangular honeycomb structures. , 2017, , . | | 1 |
| 123 | Heterogeneous model integration of complex mechanical parts based on semantic feature fusion. Engineering With Computers, 2017, 33, 797-805. | 3.5 | 5 |
| 124 | Topology optimization with finite-life fatigue constraints. Structural and Multidisciplinary Optimization, 2017, 56, 1045-1059. | 1.7 | 44 |
| 125 | A multi-resolution approach for multi-material topology optimization based on isogeometric analysis. Computer Methods in Applied Mechanics and Engineering, 2017, 323, 272-302. | 3.4 | 90 |
| 126 | Antenna Radiation Characteristics Optimization by a Hybrid Topological Method. IEEE Transactions on Antennas and Propagation, 2017, 65, 2843-2854. | 3.1 | 36 |
| 127 | Modeling and Analysis of Non-Uniform Honeycomb Structures Based on Topology Optimization. IOP Conference Series: Materials Science and Engineering, 2017, 187, 012028. | 0.3 | 0 |
| 128 | A short numerical study on the optimization methods influence on topology optimization. Structural and Multidisciplinary Optimization, 2017, 56, 1603-1612. | 1.7 | 7 |
| 129 | Topology optimization aided structural design: Interpretation, computational aspects and 3D printing. Heliyon, 2017, 3, e00431. | 1.4 | 54 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 130 | Fast native-MATLAB stiffness assembly for SIPG linear elasticity. Computers and Mathematics With Applications, 2017, 74, 3209-3230. | 1.4 | 5 |
| 131 | An Adaptive Continuation Method for Topology Optimization of Continuum Structures Considering Buckling Constraints. International Journal of Applied Mechanics, 2017, 09, 1750092. | 1.3 | 26 |
| 132 | Topology optimization for additive manufacturing: Accounting for overhang limitations using a virtual skeleton. Additive Manufacturing, 2017, 18, 58-73. | 1.7 | 48 |
| 133 | Explicit isogeometric topology optimization using moving morphable components. Computer Methods in Applied Mechanics and Engineering, 2017, 326, 694-712. | 3.4 | 72 |
| 134 | On filter boundary conditions in topology optimization. Structural and Multidisciplinary Optimization, 2017, 56, 1147-1155. | 1.7 | 86 |
| 135 | Optimum topology design of multi-material structures with non-spurious buckling constraints. Advances in Engineering Software, 2017, 114, 110-120. | 1.8 | 25 |
| 136 | Lattice Structure Design Advisor for Additive Manufacturing Using Gaussian Process., 2017,,. | | 1 |
| 137 | An intelligent computational approach for design optimization of stiffened engineering structures. International Journal of Precision Engineering and Manufacturing, 2017, 18, 1005-1012. | 1.1 | 8 |
| 138 | An Evolutionary Soft-Add Topology Optimization Method for Synthesis of Compliant Mechanisms With Maximum Output Displacement. Journal of Mechanisms and Robotics, 2017, 9, . | 1.5 | 25 |
| 139 | Multi-material topology optimization using ordered SIMP interpolation. Structural and Multidisciplinary Optimization, 2017, 55, 477-491. | 1.7 | 309 |
| 140 | Multiscale isogeometric topology optimization for lattice materials. Computer Methods in Applied Mechanics and Engineering, 2017, 316, 568-585. | 3.4 | 178 |
| 141 | On sequential approximate simultaneous analysis and design in classical topology optimization. International Journal for Numerical Methods in Engineering, 2017, 110, 227-247. | 1.5 | 3 |
| 142 | Higherâ€order multiâ€resolution topology optimization using the finite cell method. International Journal for Numerical Methods in Engineering, 2017, 110, 903-920. | 1.5 | 57 |
| 143 | An additive manufacturing filter for topology optimization of print-ready designs. Structural and Multidisciplinary Optimization, 2017, 55, 871-883. | 1.7 | 228 |
| 144 | Topology optimization of plane structures using smoothed particle hydrodynamics method. International Journal for Numerical Methods in Engineering, 2017, 110, 726-744. | 1.5 | 15 |
| 145 | Design explorations of heat conductive pathways. International Journal of Heat and Mass Transfer, 2017, 104, 835-851. | 2.5 | 29 |
| 146 | Design and development of a soft gripper with topology optimization. , 2017, , . | | 34 |
| 147 | An engineering constraint method for continuum structural topology optimization. Advances in Mechanical Engineering, 2017, 9, 168781401774338. | 0.8 | 3 |

| # | Article | IF | CITATIONS |
|-----|--|-----|-----------|
| 148 | Size and Topology Optimization of Inertial Amplification Induced Phononic Band Gap Structures. , 2017, , . | | 3 |
| 149 | Compliant Mechanism Design of Multiphase Material Wing Leading Edge. , 2017, , . | | 0 |
| 150 | A MATLAB Script for Solving $2D/3D$ Minimum Compliance Problems using Anisotropic Mesh Adaptation. Procedia Engineering, 2017 , 203 , $102-114$. | 1.2 | 4 |
| 151 | Optimal design and modeling of 3D variable-density lattice structures. , 2017, , . | | 2 |
| 152 | A New Compliance-function-shapeoriented Robust Approach for Volume-constrained Continuous Topology Optimization with Uncertain Loading Directions. Periodica Polytechnica: Civil Engineering, 0, , . | 0.6 | 3 |
| 154 | A comparative study on stress and compliance based structural topology optimization. IOP Conference Series: Materials Science and Engineering, 2017, 241, 012003. | 0.3 | 3 |
| 155 | The design of lightweight gas turbine engine parts using topology optimization. MATEC Web of Conferences, 2017, 129, 01067. | 0.1 | 10 |
| 156 | Analysis of vibration characteristics of opening device for deepwater robot cabin door and study of its structural optimization design. IOP Conference Series: Materials Science and Engineering, 2017, 274, 012008. | 0.3 | 0 |
| 157 | Heat Exchanger Design with Topology Optimization. , 0, , . | | 2 |
| 158 | Structural optimization under uncertainty in loading directions: Benchmark results. Advances in Engineering Software, 2018, 120, 68-78. | 1.8 | 18 |
| 159 | A sequential element rejection and admission (SERA) topology optimization code written in Matlab. Structural and Multidisciplinary Optimization, 2018, 58, 1297-1310. | 1.7 | 26 |
| 160 | A critical analysis of expected-compliance model in volume-constrained robust topology optimization with normally distributed loading directions, using a minimax-compliance approach alternatively. Advances in Engineering Software, 2018, 120, 107-115. | 1.8 | 8 |
| 161 | Optimized dynamic design of laminated piezocomposite multi-entry actuators considering fiber orientation. Computer Methods in Applied Mechanics and Engineering, 2018, 335, 223-254. | 3.4 | 23 |
| 162 | Topology Optimization of Conical-Beam Antennas Exploiting Rotational Symmetry. IEEE Transactions on Antennas and Propagation, 2018, 66, 2254-2261. | 3.1 | 24 |
| 163 | Topology optimization of pressure structures based on regional contour tracking technology. Structural and Multidisciplinary Optimization, 2018, 58, 687-700. | 1.7 | 7 |
| 164 | Concurrent lattice infill with feature evolution optimization for additive manufactured heat conduction design. Structural and Multidisciplinary Optimization, 2018, 58, 511-535. | 1.7 | 46 |
| 165 | Efficient structure topology optimization by using the multiscale finite element method. Structural and Multidisciplinary Optimization, 2018, 58, 1411-1430. | 1.7 | 31 |
| 166 | Eigenvalue topology optimization via efficient multilevel solution of the frequency response. International Journal for Numerical Methods in Engineering, 2018, 115, 872-892. | 1.5 | 34 |

| # | Article | IF | CITATIONS |
|-----|---|-----|-----------|
| 167 | Forte., 2018,,. | | 32 |
| 168 | Evolutionary topology optimization of continuum structures with smooth boundary representation. Structural and Multidisciplinary Optimization, 2018, 57, 2143-2159. | 1.7 | 85 |
| 169 | A Realization Method for Transforming a Topology Optimization Design into Additive Manufacturing Structures. Engineering, 2018, 4, 277-285. | 3.2 | 58 |
| 170 | Structural optimization using the boundary element method and topological derivative applied to a suspension trailing arm. Engineering Optimization, 2018, 50, 1662-1680. | 1.5 | 7 |
| 171 | Original Pylon Architecture Design Using 3D HPC Topology Optimization. , 2018, , . | | 2 |
| 172 | Design of complex bone internal structure using topology optimization with perimeter control. Computers in Biology and Medicine, 2018, 94, 74-84. | 3.9 | 46 |
| 173 | A three-dimensional topology optimization model for tooth-root morphology. Computer Methods in Biomechanics and Biomedical Engineering, 2018, 21, 177-185. | 0.9 | 5 |
| 174 | An 88-line MATLAB code for the parameterized level set method based topology optimization using radial basis functions. Structural and Multidisciplinary Optimization, 2018, 58, 831-849. | 1.7 | 187 |
| 175 | Topology optimization of deformable bodies with dissimilar interfaces. Computers and Structures, 2018, 198, 1-11. | 2.4 | 11 |
| 176 | Multi-material topology optimization for the transient heat conduction problem using a sequential quadratic programming algorithm. Engineering Optimization, 2018, 50, 2091-2107. | 1.5 | 48 |
| 177 | Contributions to Handle Maximum Size Constraints in Density-Based Topology Optimization. , 2018, , 1054-1068. | | 0 |
| 178 | Pylon and Engine Mounts Performance Driven Structural Topology Optimization. , 2018, , 1349-1363. | | 0 |
| 179 | A modified gradient projection method for static and dynamic topology optimization. Engineering Optimization, 2018, 50, 1515-1532. | 1.5 | 5 |
| 180 | Efficient automatic discrete adjoint sensitivity computation for topology optimization – heat conduction applications. International Journal of Numerical Methods for Heat and Fluid Flow, 2018, 28, 439-471. | 1.6 | 4 |
| 181 | Implementation of topology optimization using openMDAO., 2018,,. | | 6 |
| 182 | Coupling lattice structure topology optimization with design-dependent feature evolution for additive manufactured heat conduction design. Computer Methods in Applied Mechanics and Engineering, 2018, 332, 408-439. | 3.4 | 110 |
| 183 | Robust topology optimization for continuum structures with random loads. Engineering Computations, 2018, 35, 710-732. | 0.7 | 17 |
| 184 | Shape preserving design of vibrating structures using topology optimization. Structural and Multidisciplinary Optimization, 2018, 58, 1109-1119. | 1.7 | 11 |

| # | Article | IF | CITATIONS |
|-----|--|-----|-----------|
| 185 | 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 |
| 186 | Frequency response as a surrogate eigenvalue problem in topology optimization. International Journal for Numerical Methods in Engineering, 2018, 113, 1214-1229. | 1.5 | 28 |
| 187 | Homogenizationâ€based topology optimization for highâ€resolution manufacturable microstructures. International Journal for Numerical Methods in Engineering, 2018, 113, 1148-1163. | 1.5 | 224 |
| 188 | Design and optimization of nonuniform cellular structures. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2018, 232, 1280-1293. | 1.1 | 11 |
| 189 | Infill Optimization for Additive Manufacturing—Approaching Bone-Like Porous Structures. IEEE Transactions on Visualization and Computer Graphics, 2018, 24, 1127-1140. | 2.9 | 326 |
| 190 | Robust topology optimization of continuum structures with loading uncertainty using a perturbation method. Engineering Optimization, 2018, 50, 584-598. | 1.5 | 15 |
| 191 | A topology optimization formulation for transient design of multiâ€entry laminated piezocomposite energy harvesting devices coupled with electrical circuit. International Journal for Numerical Methods in Engineering, 2018, 113, 1370-1410. | 1.5 | 21 |
| 192 | A combined parametric shape optimization and ersatz material approach. Structural and Multidisciplinary Optimization, 2018, 57, 1297-1315. | 1.7 | 7 |
| 193 | Diverse competitive design for topology optimization. Structural and Multidisciplinary Optimization, 2018, 57, 891-902. | 1.7 | 20 |
| 194 | A new bilateral density filter with cross template for structural topology optimization. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2018, 232, 3823-3832. | 1.1 | 1 |
| 196 | On design-set restriction in SAND topology optimization. Structural and Multidisciplinary Optimization, 2018, 57, 1579-1592. | 1.7 | 2 |
| 197 | Multi-material proportional topology optimization based on the modified interpolation scheme. Engineering With Computers, 2018, 34, 287-305. | 3.5 | 27 |
| 198 | A Mesh Generation Method for Structural Topology Optimization Based on Genetic Algorithm. , 2018, , . | | 0 |
| 199 | A Novel Optimization Design Method of Additive Manufacturing Oriented Porous Structures. , 2018, , . | | 3 |
| 200 | Finding Better Local Optima in Topology Optimization via Tunneling. , 2018, , . | | 4 |
| 201 | Design Automation by Integrating Generative Adversarial Networks and Topology Optimization. , 2018, , . | | 13 |
| 202 | A Novel Adaptive Topology Optimization Method Considering Unnecessary Element Removal and Progressive Mesh Refinement. , 2018, , . | | 0 |
| 203 | Overhanging Feature Analysis for the Additive Manufacturing of Topology Optimized Structures. , 2018, , . | | 1 |

| # | Article | IF | Citations |
|-----|---|-----|-----------|
| 204 | Data-Driven Additive Manufacturing Constraints for Topology Optimization., 2018,,. | | 5 |
| 205 | The Design of Ortho-Planar Spring for a Normally-Closed Gate Valve. , 2018, , . | | 0 |
| 206 | A new overhang constraint for topology optimization of self-supporting structures in additive manufacturing. Structural and Multidisciplinary Optimization, 2018, 58, 2003-2017. | 1.7 | 66 |
| 207 | An efficient moving morphable component (MMC)-based approach for multi-resolution topology optimization. Structural and Multidisciplinary Optimization, 2018, 58, 2455-2479. | 1.7 | 67 |
| 208 | Stress-Constrained Topology Optimization for Lattice Materials. , 2018, , 1-19. | | 4 |
| 209 | Immersed Boundary Eigenvalue Analysis of Timoshenko Beams and Mindlin Plates. , 2018, , . | | 1 |
| 210 | Cluster-Based Optimization of Cellular Materials and Structures for Crashworthiness. Journal of Mechanical Design, Transactions of the ASME, 2018, 140, . | 1.7 | 11 |
| 211 | Optimization of Structures Made From Composites With Elliptical Inclusions. Journal of Applied Mechanics, Transactions ASME, 2018, 85, . | 1.1 | 3 |
| 212 | Optimal design of three-dimensional non-uniform nylon lattice structures for selective laser sintering manufacturing. Advances in Mechanical Engineering, 2018, 10, 168781401879083. | 0.8 | 21 |
| 213 | Discrete multi-material topology optimization under total mass constraint. CAD Computer Aided Design, 2018, 102, 182-192. | 1.4 | 19 |
| 214 | An asymptotically concentrated method for structural topology optimization based on the SIMLF interpolation. International Journal for Numerical Methods in Engineering, 2018, 115, 1175-1216. | 1.5 | 8 |
| 215 | Comparison of Ortho-planar Spring design optimization based on Linear Elastic and Hyper Elastic Materials. MATEC Web of Conferences, 2018, 166, 01004. | 0.1 | 0 |
| 216 | Design of cellular based structures in sandwiched morphing skin via topology optimization. Structural and Multidisciplinary Optimization, 2018, 58, 2085-2098. | 1.7 | 4 |
| 217 | 3D-Printable Unit Cell Design for Cubic and Orthotropic Porous Microstructures Using Topology Optimization Based on Optimality Criteria Algorithm. International Journal of Applied Mechanics, 2018, 10, 1850060. | 1.3 | 7 |
| 218 | Design and Development of a Topology-Optimized Three-Dimensional Printed Soft Gripper. Soft Robotics, 2018, 5, 650-661. | 4.6 | 45 |
| 219 | Topology optimization of stokes flow on dynamic meshes using simple optimizers. Computers and Fluids, 2018, 174, 66-77. | 1.3 | 6 |
| 220 | Topology optimization and laser additive manufacturing in design process of efficiency lightweight aerospace parts. Journal of Physics: Conference Series, 2018, 1015, 052006. | 0.3 | 16 |
| 221 | On topology optimization and canonical duality method. Computer Methods in Applied Mechanics and Engineering, 2018, 341, 249-277. | 3.4 | 12 |

| # | Article | IF | CITATIONS |
|-----|---|-----|-----------|
| 222 | A level set-based structural optimization code using FEniCS. Structural and Multidisciplinary Optimization, 2018, 58, 1311-1334. | 1.7 | 42 |
| 223 | A new isogeometric topology optimization using moving morphable components based on R-functions and collocation schemes. Computer Methods in Applied Mechanics and Engineering, 2018, 339, 61-90. | 3.4 | 71 |
| 224 | Continuous optimization of adaptive quadtree structures. CAD Computer Aided Design, 2018, 102, 72-82. | 1.4 | 17 |
| 225 | Hip Implant Design With Three-Dimensional Porous Architecture of Optimized Graded Density. Journal of Mechanical Design, Transactions of the ASME, 2018, 140, . | 1.7 | 121 |
| 226 | Achieving stress-constrained topological design via length scale control. Structural and Multidisciplinary Optimization, 2018, 58, 2053-2071. | 1.7 | 20 |
| 227 | Adopting feature resolution and material distribution constraints into topology optimisation of additive manufacturing components. Virtual and Physical Prototyping, 2019, 14, 79-91. | 5.3 | 10 |
| 228 | Structural topology optimization involving bi-modulus materials with asymmetric properties in tension and compression. Computational Mechanics, 2019, 63, 335-363. | 2.2 | 21 |
| 229 | A C# code for solving 3D topology optimization problems using SAP2000. Optimization and Engineering, 2019, 20, 1-35. | 1.3 | 25 |
| 230 | Deep Generative Design: Integration of Topology Optimization and Generative Models. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, . | 1.7 | 190 |
| 231 | Concurrent topology optimization of multiscale composite structures in Matlab. Structural and Multidisciplinary Optimization, 2019, 60, 2621-2651. | 1.7 | 90 |
| 232 | A level set topology optimization method using a biharmonic equation based on plate theory. Structural and Multidisciplinary Optimization, 2019, 60, 2431-2459. | 1.7 | 3 |
| 233 | Density-based topology optimization for 3D-printable building structures. Structural and Multidisciplinary Optimization, 2019, 60, 2391-2403. | 1.7 | 22 |
| 234 | Topology Optimization Design of Compliant Mechanism of Composite Wing Leading Edge. Journal of Physics: Conference Series, 2019, 1215, 012002. | 0.3 | 4 |
| 235 | Design of buckling constrained multiphase material structures using continuum topology optimization. Meccanica, 2019, 54, 1179-1201. | 1.2 | 16 |
| 236 | Robust multiphase topology optimization accounting for manufacturing uncertainty via stochastic collocation. Structural and Multidisciplinary Optimization, 2019, 60, 2461-2476. | 1.7 | 10 |
| 237 | Structural Design Using Laplacian Shells. Computer Graphics Forum, 2019, 38, 85-98. | 1.8 | 5 |
| 238 | Designing Self Supported SLM Structures via Topology Optimization. Journal of Manufacturing and Materials Processing, 2019, 3, 68. | 1.0 | 14 |
| 239 | Toward holistic tension- or compression-biased structural designs using topology optimization. Engineering Structures, 2019, 199, 109632. | 2.6 | 24 |

| # | Article | IF | CITATIONS |
|-----|--|-----|-----------|
| 240 | Neural networks for topology optimization. Russian Journal of Numerical Analysis and Mathematical Modelling, 2019, 34, 215-223. | 0.2 | 142 |
| 241 | Optimized microstructures for multifunctional structural electrolytes. Multifunctional Materials, 2019, 2, 045001. | 2.4 | 10 |
| 242 | Hybrid reinforcement design of longitudinal joints for segmental concrete linings. Structural Concrete, 2019, 20, 1926-1940. | 1.5 | 30 |
| 243 | A material-field series-expansion method for topology optimization of continuum structures. Computers and Structures, 2019, 225, 106122. | 2.4 | 76 |
| 244 | Optimization on mechanical structure for material nonlinearity based on proportional topology method. Journal of Advanced Simulation in Science and Engineering, 2019, 6, 354-366. | 0.1 | 5 |
| 245 | Review on design and structural optimisation in additive manufacturing: Towards next-generation lightweight structures. Materials and Design, 2019, 183, 108164. | 3.3 | 397 |
| 246 | Engine Pylon Topology Optimization Framework Based on Performance and Stress Criteria. AIAA Journal, 2019, 57, 5514-5526. | 1.5 | 4 |
| 247 | An optimization framework for the design of piezoelectric AFM cantilevers. Precision Engineering, 2019, 60, 130-142. | 1.8 | 6 |
| 248 | Isogeometric Bi-Directional Evolutionary Structural Optimization. IEEE Access, 2019, 7, 91134-91145. | 2.6 | 18 |
| 249 | An Improved Guide-Weight Method Without the Sensitivity Analysis. IEEE Access, 2019, 7, 109208-109215. | 2.6 | 3 |
| 250 | Topology optimization of stress-constrained structural elements using risk-factor approach. Computers and Structures, 2019, 224, 106104. | 2.4 | 12 |
| 251 | Shape preserving design of geometrically nonlinear structures using topology optimization. Structural and Multidisciplinary Optimization, 2019, 59, 1033-1051. | 1.7 | 20 |
| 252 | A novel optimization design method of additive manufacturing oriented porous structures and experimental validation. Materials and Design, 2019, 163, 107550. | 3.3 | 30 |
| 253 | Topology optimization via sequential integer programming and Canonical relaxation algorithm. Computer Methods in Applied Mechanics and Engineering, 2019, 348, 64-96. | 3.4 | 53 |
| 254 | L-System-Generated Mechanism Topology Optimization Using Graph-Based Interpretation. Journal of Mechanisms and Robotics, 2019, 11, . | 1.5 | 10 |
| 255 | Automatic Truss Design Based on Topology Optimization and Image Processing Techniques. Mechanisms and Machine Science, 2019, , 459-468. | 0.3 | 1 |
| 256 | Non-iterative structural topology optimization using deep learning. CAD Computer Aided Design, 2019, 115, 172-180. | 1.4 | 66 |
| 257 | Free isotropic material optimization via second order cone programming. CAD Computer Aided Design, 2019, 115, 52-63. | 1.4 | 5 |

| # | Article | IF | CITATIONS |
|-----|--|-----|-----------|
| 258 | An aggregation strategy of maximum size constraints in density-based topology optimization. Structural and Multidisciplinary Optimization, 2019, 60, 2113-2130. | 1.7 | 29 |
| 259 | A novel subdomain level set method for structural topology optimization and its application in graded cellular structure design. Structural and Multidisciplinary Optimization, 2019, 60, 2221-2247. | 1.7 | 37 |
| 260 | Cut topology optimization for linear elasticity with coupling to parametric nondesign domain regions. Computer Methods in Applied Mechanics and Engineering, 2019, 350, 462-479. | 3.4 | 13 |
| 261 | Topology optimization of thermal conductive support structures for laser additive manufacturing. Computer Methods in Applied Mechanics and Engineering, 2019, 353, 24-43. | 3.4 | 69 |
| 262 | Development and validation of a genetic L-System programming framework for topology optimization of multifunctional structures. Computers and Structures, 2019, 218, 152-169. | 2.4 | 14 |
| 263 | Efficient quantification of material uncertainties in reliability-based topology optimization using random matrices. Computer Methods in Applied Mechanics and Engineering, 2019, 351, 548-570. | 3.4 | 17 |
| 264 | A two-material topology optimization method for structures under steady thermo-mechanical loading. Journal of Intelligent Material Systems and Structures, 2019, 30, 1717-1726. | 1.4 | 5 |
| 265 | Rapid non-linear finite element analysis of continuous and discontinuous Galerkin methods in MATLAB. Computers and Mathematics With Applications, 2019, 78, 3007-3026. | 1.4 | 5 |
| 266 | Topology optimization of energy absorbers under crashworthiness using modified hybrid cellular automata (MHCA) algorithm. Structural and Multidisciplinary Optimization, 2019, 60, 1021-1034. | 1.7 | 19 |
| 267 | A fuzzy optimization method for octet-truss lattices. Rapid Prototyping Journal, 2019, 25, 1525-1535. | 1.6 | 2 |
| 268 | Topology optimization for concurrent design of layer-wise graded lattice materials and structures. International Journal of Engineering Science, 2019, 138, 26-49. | 2.7 | 55 |
| 269 | Customization and topology optimization of compression casts/braces on two-manifold surfaces. CAD Computer Aided Design, 2019, 111, 113-122. | 1.4 | 19 |
| 270 | A triple acceleration method for topology optimization. Structural and Multidisciplinary Optimization, 2019, 60, 727-744. | 1.7 | 28 |
| 271 | Parametric topology optimization with multiresolution finite element models. International Journal for Numerical Methods in Engineering, 2019, 119, 567-589. | 1.5 | 18 |
| 272 | Three-dimensional stress-based topology optimization using SIMP method. International Journal for Simulation and Multidisciplinary Design Optimization, 2019, 10, A1. | 0.6 | 11 |
| 273 | Exploring conditions that make cortical bone geometry optimal for physiological loading. Biomechanics and Modeling in Mechanobiology, 2019, 18, 1335-1349. | 1.4 | 4 |
| 274 | GHOSTâ€"Gate to Hybrid Optimization of Structural Topologies. Materials, 2019, 12, 1152. | 1.3 | 3 |
| 275 | Topology optimization of oilstone components considering carbon emissions associated with honing processes. Journal of Cleaner Production, 2019, 225, 181-195. | 4.6 | 6 |

| # | Article | IF | CITATIONS |
|-----|--|-----|-----------|
| 276 | Allocation Strategies for High Fidelity Models in the Multifidelity Regime. SIAM-ASA Journal on Uncertainty Quantification, 2019, 7, 203-231. | 1.1 | 8 |
| 277 | Density filtering regularization of finite element model updating problems. Mechanical Systems and Signal Processing, 2019, 128, 282-294. | 4.4 | 4 |
| 278 | Topology Optimization of Periodic Structures With Substructuring. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, . | 1.7 | 25 |
| 279 | Continuous Fiber Angle Topology Optimization for Polymer Composite Deposition Additive Manufacturing Applications. Fibers, 2019, 7, 14. | 1.8 | 58 |
| 280 | Topology optimization in OpenMDAO. Structural and Multidisciplinary Optimization, 2019, 59, 1385-1400. | 1.7 | 7 |
| 281 | Tension/compression anisotropy enhanced topology design. Structural and Multidisciplinary Optimization, 2019, 59, 2227-2255. | 1.7 | 22 |
| 283 | Topology Optimization Of Industrial Manipulator-Link Considering Dynamic Loading. Materials Today: Proceedings, 2019, 18, 3717-3725. | 0.9 | 11 |
| 284 | Influence of Density-Based Topology Optimization Parameters on the Design of Periodic Cellular Materials. Materials, 2019, 12, 3736. | 1.3 | 4 |
| 285 | Compliance, Stress-Based and Multi-physics Topology Optimization for 3D-Printed Concrete Structures. RILEM Bookseries, 2019, , 323-332. | 0.2 | 16 |
| 286 | Comparison of thermodynamic topology optimization with SIMP. Continuum Mechanics and Thermodynamics, 2019, 31, 521-548. | 1.4 | 11 |
| 287 | An improved numerically-stable equivalent static loads (ESLs) algorithm based on energy-scaling ratio for stiffness topology optimization under crash loads. Structural and Multidisciplinary Optimization, 2019, 59, 117-130. | 1.7 | 17 |
| 288 | Conceptual design of AM components using layout and geometry optimization. Computers and Mathematics With Applications, 2019, 78, 2308-2324. | 1.4 | 17 |
| 289 | Shape and topology optimization considering anisotropic features induced by additive manufacturing processes. Computer Methods in Applied Mechanics and Engineering, 2019, 344, 626-665. | 3.4 | 64 |
| 290 | Concurrent Structure and Process Optimization for Minimum Cost Metal Additive Manufacturing. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, . | 1.7 | 23 |
| 291 | Stress-constrained topology optimization of continuum structures subjected to harmonic force excitation using sequential quadratic programming. Structural and Multidisciplinary Optimization, 2019, 59, 1747-1759. | 1.7 | 55 |
| 292 | An accurate and fast regularization approach to thermodynamic topology optimization. International Journal for Numerical Methods in Engineering, 2019, 117, 991-1017. | 1.5 | 19 |
| 293 | A simple method for coupled acoustic-mechanical analysis with application to gradient-based topology optimization. Structural and Multidisciplinary Optimization, 2019, 59, 1567-1580. | 1.7 | 11 |
| 294 | A 213-line topology optimization code for geometrically nonlinear structures. Structural and Multidisciplinary Optimization, 2019, 59, 1863-1879. | 1.7 | 62 |

| # | Article | IF | CITATIONS |
|-----|--|-----|-----------|
| 295 | Deep learning for determining a near-optimal topological design without any iteration. Structural and Multidisciplinary Optimization, 2019, 59, 787-799. | 1.7 | 199 |
| 296 | A biomimetic generative optimization design for conductive heat transfer based on element-free Galerkin method. International Communications in Heat and Mass Transfer, 2019, 100, 67-72. | 2.9 | 22 |
| 297 | A multiobjective topology optimization approach for cost and time minimization in additive manufacturing. International Journal for Numerical Methods in Engineering, 2019, 118, 371-394. | 1.5 | 29 |
| 298 | Topology Optimization of Composite Self-Deployable Thin Shells with Cutouts. , 2019, , . | | 4 |
| 299 | The trends and challenges of fiber reinforced additive manufacturing. International Journal of Advanced Manufacturing Technology, 2019, 102, 1801-1818. | 1.5 | 115 |
| 300 | Temperature-constrained topology optimization of thermo-mechanical coupled problems. Engineering Optimization, 2019, 51, 1687-1709. | 1.5 | 38 |
| 301 | Explicit model of dual programming and solving method for a class of separable convex programming problems. Engineering Optimization, 2019, 51, 1604-1625. | 1.5 | 5 |
| 302 | Topology Optimization of Dynamic Systems Under Uncertain Loads: An Hâ^ž-Norm-Based Approach. Journal of Computational and Nonlinear Dynamics, 2019, 14, . | 0.7 | 2 |
| 303 | Design of sandwich panels with truss cores using explicit topology optimization. Composite Structures, 2019, 210, 892-905. | 3.1 | 30 |
| 304 | Distortion energy-based topology optimization design of hyperelastic materials. Structural and Multidisciplinary Optimization, 2019, 59, 1895-1913. | 1.7 | 16 |
| 305 | A surrogate assisted adaptive framework for robust topology optimization. Computer Methods in Applied Mechanics and Engineering, 2019, 346, 63-84. | 3.4 | 16 |
| 306 | A memory-distributed quasi-Newton solver for nonlinear programming problems with a small number of general constraints. Journal of Parallel and Distributed Computing, 2019, 133, 337-348. | 2.7 | 9 |
| 307 | Topology optimization of multi-material structures with graded interfaces. Computer Methods in Applied Mechanics and Engineering, 2019, 346, 1096-1117. | 3.4 | 42 |
| 308 | A Hybrid Method for Density-Related Topology Optimization. International Journal of Computational Methods, 2019, 16, 1850116. | 0.8 | 4 |
| 309 | Grey filter functions for suppression of grey-scale elements. Engineering Optimization, 2019, 51, 317-331. | 1.5 | 3 |
| 310 | Virtual element method (VEM)-based topology optimization: an integrated framework. Structural and Multidisciplinary Optimization, 2020, 62, 1089-1114. | 1.7 | 26 |
| 311 | From Topology Optimization Design to Additive Manufacturing: Today's Success and Tomorrow's Roadmap. Archives of Computational Methods in Engineering, 2020, 27, 805-830. | 6.0 | 206 |
| 312 | An Improved Density-Based Design Method of Additive Manufacturing Fabricated Inhomogeneous Cellular-Solid Structures. International Journal of Precision Engineering and Manufacturing, 2020, 21, 103-116. | 1.1 | 4 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 313 | Design of compliant mechanisms using continuum topology optimization: A review. Mechanism and Machine Theory, 2020, 143, 103622. | 2.7 | 218 |
| 314 | Design and analysis adaptivity in multiresolution topology optimization. International Journal for Numerical Methods in Engineering, 2020, 121, 450-476. | 1.5 | 18 |
| 315 | Robust topology optimization for multi-material structures under interval uncertainty. Applied Mathematical Modelling, 2020, 78, 627-647. | 2.2 | 34 |
| 316 | A study on practical objectives and constraints for heat conduction topology optimization. Structural and Multidisciplinary Optimization, 2020, 61, 475-489. | 1.7 | 22 |
| 317 | Exploiting Lagrange duality for topology optimizationwith frictionless unilateral contact. Japan Journal of Industrial and Applied Mathematics, 2020, 37, 25-48. | 0.5 | 1 |
| 318 | Topology optimization of coated structure using moving morphable sandwich bars. Structural and Multidisciplinary Optimization, 2020, 61, 491-506. | 1.7 | 27 |
| 319 | Support-free robust topology optimization based on pseudo-inverse stiffness matrix and eigenvalue analysis. Structural and Multidisciplinary Optimization, 2020, 61, 59-76. | 1.7 | 3 |
| 320 | An efficient isogeometric topology optimization using multilevel mesh, MGCG and local-update strategy. Advances in Engineering Software, 2020, 139, 102733. | 1.8 | 42 |
| 321 | Conceptual design of structural systems based on topology optimization and prefabricated components. Computers and Structures, 2020, 226, 106136. | 2.4 | 31 |
| 322 | On Barrier and Modified Barrier Multigrid Methods for Three-Dimensional Topology Optimization. SIAM Journal of Scientific Computing, 2020, 42, A28-A53. | 1.3 | 1 |
| 323 | Explicit isogeometric topology optimization based on moving morphable voids with closed B-spline boundary curves. Structural and Multidisciplinary Optimization, 2020, 61, 963-982. | 1.7 | 32 |
| 324 | Optimal design of MR sandwich plates using a level set based topology optimization method. Smart Materials and Structures, 2020, 29, 015027. | 1.8 | 2 |
| 325 | Simultaneous singleâ€loop multimaterial and multijoint topology optimization. International Journal for Numerical Methods in Engineering, 2020, 121, 1558-1594. | 1.5 | 15 |
| 326 | Multiscale topology optimization for coated structures with multifarious-microstructural infill. Structural and Multidisciplinary Optimization, 2020, 61, 1473-1494. | 1.7 | 23 |
| 327 | Accelerated fixed-point formulation of topology optimization: Application to compliance minimization problems. Mechanics Research Communications, 2020, 103, 103469. | 1.0 | 7 |
| 328 | Further elaborations on topology optimization via sequential integer programming and Canonical relaxation algorithm and 128-line MATLAB code. Structural and Multidisciplinary Optimization, 2020, 61, 411-431. | 1.7 | 42 |
| 329 | Designing phononic crystal with anticipated band gap through a deep learning based data-driven method. Computer Methods in Applied Mechanics and Engineering, 2020, 361, 112737. | 3.4 | 113 |
| 330 | Evolutionary Black-Box Topology Optimization: Challenges and Promises. IEEE Transactions on Evolutionary Computation, 2020, 24, 613-633. | 7.5 | 20 |

| # | Article | IF | Citations |
|-----|---|-----|-----------|
| 331 | Stochastic stress-based topology optimization of structural frames based upon the second deviatoric stress invariant. Engineering Structures, 2020, 224, 111186. | 2.6 | 8 |
| 332 | Invited review: Machine learning for materials developments in metals additive manufacturing. Additive Manufacturing, 2020, 36, 101641. | 1.7 | 61 |
| 333 | Realization of an ultrawide stop band in a 2-D elastic metamaterial with topologically optimized inertial amplification mechanisms. International Journal of Solids and Structures, 2020, 203, 138-150. | 1.3 | 68 |
| 334 | A Three-Dimensional and Bi-objective Topological Optimization Approach Based on Piezoelectric Energy Harvester. Applied Sciences (Switzerland), 2020, 10, 6772. | 1.3 | 4 |
| 335 | SEMDOT: Smooth-edged material distribution for optimizing topology algorithm. Advances in Engineering Software, 2020, 150, 102921. | 1.8 | 33 |
| 336 | Controlling wave propagation in one-dimensional structures through topology optimization. Computers and Structures, 2020, 241, 106368. | 2.4 | 12 |
| 337 | Topology optimization method for the design of bioinspired self-similar hierarchical microstructures. Computer Methods in Applied Mechanics and Engineering, 2020, 372, 113399. | 3.4 | 22 |
| 338 | Topology optimization under uncertainty using a stochastic gradient-based approach. Structural and Multidisciplinary Optimization, 2020, 62, 2255-2278. | 1.7 | 26 |
| 339 | Efficient topology optimization based on DOF reduction and convergence acceleration methods. Advances in Engineering Software, 2020, 149, 102890. | 1.8 | 11 |
| 340 | An efficient gradient projection method for structural topology optimization. Advances in Engineering Software, 2020, 149, 102863. | 1.8 | 6 |
| 341 | Topology optimization of composite material with high broadband damping. Computers and Structures, 2020, 239, 106331. | 2.4 | 19 |
| 342 | New hybrids $\hat{a} \in \text{``from textile logics towards tailored material behaviour. Architectural Engineering and Design Management, 2020, , 1-6.}$ | 1.2 | 3 |
| 343 | Topology Optimization considering Nonsmooth Structural Boundaries in the Intersection Areas of the Components. Shock and Vibration, 2020, 2020, 1-14. | 0.3 | 1 |
| 344 | Topology optimization of transient nonlinear heat conduction using an adaptive parameterized level-set method. Engineering Optimization, 2021, 53, 2017-2039. | 1.5 | 7 |
| 345 | Deep super-resolution neural network for structural topology optimization. Engineering Optimization, 2021, 53, 2108-2121. | 1.5 | 12 |
| 346 | Topology Optimization of Elastoplastic Behavior Conditions by Selectively Suppressing Plastic Work. Mathematics, 2020, 8, 2062. | 1.1 | 4 |
| 347 | Bi-fidelity stochastic gradient descent for structural optimization under uncertainty. Computational Mechanics, 2020, 66, 745-771. | 2.2 | 17 |
| 348 | Self-supporting topology optimization method for selective laser melting. Additive Manufacturing, 2020, 36, 101506. | 1.7 | 9 |

| # | Article | IF | CITATIONS |
|-----|--|-----|-----------|
| 349 | Checkerboard free topology optimization for compliance minimization applying the finite-volume theory. Mechanics Research Communications, 2020, 108, 103581. | 1.0 | 6 |
| 350 | Topology optimization of cast parts considering parting surface position. Advances in Engineering Software, 2020, 149, 102886. | 1.8 | 11 |
| 351 | Exploration on Extracting Geometric Model by Topology Optimization Design. IOP Conference Series: Materials Science and Engineering, 2020, 772, 012072. | 0.3 | 2 |
| 352 | Iterative reanalysis approximationâ€assisted moving morphable componentâ€based topology optimization method. International Journal for Numerical Methods in Engineering, 2020, 121, 5101-5122. | 1.5 | 9 |
| 353 | High-risk prediction localization: evaluating the reliability of black box models for topology optimization. Structural and Multidisciplinary Optimization, 2020, 62, 3053-3069. | 1.7 | 2 |
| 354 | Sequentially coupled gradient-based topology and domain shape optimization. Optimization and Engineering, 2022, 23, 25-58. | 1.3 | 5 |
| 355 | Illusion thermotics with topology optimization. Journal of Applied Physics, 2020, 128, . | 1.1 | 30 |
| 356 | Numerical performance of Poisson method for restricting enclosed voids in topology optimization. Computers and Structures, 2020, 239, 106337. | 2.4 | 17 |
| 357 | A new generation 99 line Matlab code for compliance topology optimization and its extension to 3D. Structural and Multidisciplinary Optimization, 2020, 62, 2211-2228. | 1.7 | 114 |
| 358 | Singularity aware de-homogenization for high-resolution topology optimized structures. Structural and Multidisciplinary Optimization, 2020, 62, 2279-2295. | 1.7 | 25 |
| 359 | Similarity control in topology optimization under static and crash loading scenarios. Engineering Optimization, 2020, , 1-16. | 1.5 | 7 |
| 360 | An efficient multi-resolution topology optimization scheme for stiffness maximization and stress minimization. Engineering Optimization, 2020, , 1-21. | 1.5 | 1 |
| 361 | Sliding Basis Optimization for Heterogeneous Material Design. CAD Computer Aided Design, 2020, 127, 102864. | 1.4 | 0 |
| 362 | Enforcing a Force–Displacement Curve of a Nonlinear Structure Using Topology Optimization with Slope Constraints. Applied Sciences (Switzerland), 2020, 10, 2676. | 1.3 | 5 |
| 363 | Multi-grid reduced-order topology optimization. Structural and Multidisciplinary Optimization, 2020, 61, 1-23. | 1.7 | 28 |
| 364 | On the co-rotational method for geometrically nonlinear topology optimization. Structural and Multidisciplinary Optimization, 2020, 62, 2357-2374. | 1.7 | 9 |
| 365 | Imposing minimum and maximum member size, minimum cavity size, and minimum separation distance between solid members in topology optimization. Computer Methods in Applied Mechanics and Engineering, 2020, 368, 113157. | 3.4 | 39 |
| 366 | High performance topology optimization computing platform. Procedia Manufacturing, 2020, 44, 441-448. | 1.9 | 4 |

| # | Article | IF | CITATIONS |
|-----|---|-------------|-----------|
| 367 | Topology optimization of structures under design-dependent pressure loads by a boundary identification-load evolution (BILE) model. Structural and Multidisciplinary Optimization, 2020, 62, 1865-1883. | 1.7 | 12 |
| 368 | Assembly Level Topology Optimization Towards a Part Consolidation Algorithm for Additive Manufacturing. , 2020, , . | | 4 |
| 369 | Polygonal topology optimization for Reissner–Mindlin plates. Engineering With Computers, 2020, , 1. | 3. 5 | 4 |
| 370 | Topology optimization based on deep representation learning (DRL) for compliance and stress-constrained design. Computational Mechanics, 2020, 66, 449-469. | 2.2 | 31 |
| 371 | Topology optimization of continuum supporting structures for microwave antenna applications. Structural and Multidisciplinary Optimization, 2020, 62, 2409-2422. | 1.7 | 5 |
| 372 | An Enhanced Topology Optimization Approach Based on the Combined MMC and NURBS-Curve Boundaries. International Journal of Precision Engineering and Manufacturing, 2020, 21, 1529-1538. | 1.1 | 7 |
| 373 | "String art―approach to the design and manufacturing of optimal composite materials and structures. Composite Structures, 2020, 246, 112396. | 3.1 | 3 |
| 374 | Simultaneous layout and topology optimization of curved stiffened panels. , 2020, , . | | 0 |
| 375 | CARMAâ€"Cellular Automata with Refined Mesh Adaptationâ€"The Easy Way of Generation of Structural Topologies. Applied Sciences (Switzerland), 2020, 10, 3691. | 1.3 | 3 |
| 376 | An ANSYS APDL code for topology optimization of structures with multi-constraints using the BESO method with dynamic evolution rate (DER-BESO). Structural and Multidisciplinary Optimization, 2020, 62, 2229-2254. | 1.7 | 28 |
| 377 | Novel implementation of extrusion constraint in topology optimization by Helmholtz-type anisotropic filter. Structural and Multidisciplinary Optimization, 2020, 62, 2091-2100. | 1.7 | 16 |
| 378 | Shape preserving design of thermo-elastic structures considering geometrical nonlinearity. Structural and Multidisciplinary Optimization, 2020, 61, 1787-1804. | 1.7 | 11 |
| 379 | A projection approach for topology optimization of porous structures through implicit local volume control. Structural and Multidisciplinary Optimization, 2020, 62, 835-850. | 1.7 | 17 |
| 380 | Design of a local resonator using topology optimization to tailor bandgaps in plate structures. Materials and Design, 2020, 191, 108627. | 3.3 | 16 |
| 381 | Multi-material topology optimization of compliant mechanisms via solid isotropic material with penalization approach and alternating active phase algorithm. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2020, 234, 2631-2642. | 1.1 | 4 |
| 382 | Topology optimization using material-field series expansion and Kriging-based algorithm: An effective non-gradient method. Computer Methods in Applied Mechanics and Engineering, 2020, 364, 112966. | 3.4 | 63 |
| 383 | Topology optimization of 2DOF piezoelectric plate energy harvester under external in-plane force. Journal of Micro-Bio Robotics, 2020, 16, 65-77. | 2.1 | 16 |
| 384 | An artificial accelerogram generator code written in Matlab. Engineering Reports, 2020, 2, e12129. | 0.9 | 19 |

| # | Article | IF | CITATIONS |
|-----|---|-----|-----------|
| 385 | Misalignment topology optimization with manufacturing constraints. Structural and Multidisciplinary Optimization, 2020, 61, 2467-2480. | 1.7 | 0 |
| 386 | Level set topology and shape optimization by density methods using cut elements with length scale control. Structural and Multidisciplinary Optimization, 2020, 62, 685-707. | 1.7 | 49 |
| 387 | A MATLAB code for topology optimization using the geometry projection method. Structural and Multidisciplinary Optimization, 2020, 62, 1579-1594. | 1.7 | 30 |
| 388 | Layout optimization of viscoelastic damping for noise control of mid-frequency vibro-acoustic systems. Structural and Multidisciplinary Optimization, 2020, 62, 667-684. | 1.7 | 4 |
| 389 | Accelerated topology optimization by means of deep learning. Structural and Multidisciplinary Optimization, 2020, 62, 1185-1212. | 1.7 | 59 |
| 390 | Inverse design of an indoor environment using a filterâ€based topology method with experimental verification. Indoor Air, 2020, 30, 1039-1051. | 2.0 | 11 |
| 391 | An efficient evolutionary structural optimization method for multi-resolution designs. Structural and Multidisciplinary Optimization, 2020, 62, 787-803. | 1.7 | 13 |
| 392 | EML webinar overview: Topology Optimization â€" Status and Perspectives. Extreme Mechanics Letters, 2020, 39, 100855. | 2.0 | 15 |
| 393 | A topology optimization implementation for depth-of-focus extension of binary phase filters. Structural and Multidisciplinary Optimization, 2020, 62, 2731-2748. | 1.7 | 7 |
| 394 | Conceptual structural system layouts via design response grammars and evolutionary algorithms. Automation in Construction, 2020, 116, 103009. | 4.8 | 13 |
| 395 | Toptimiz3D: A topology optimization software using unstructured meshes. Advances in Engineering Software, 2020, 148, 102875. | 1.8 | 12 |
| 396 | A critical evaluation of topology optimization results for strutâ€nndâ€tie modeling of reinforced concrete. Computer-Aided Civil and Infrastructure Engineering, 2020, 35, 850-869. | 6.3 | 31 |
| 397 | Momentum method powered by swarm approaches for topology optimization. Applied Soft Computing Journal, 2020, 90, 106174. | 4.1 | 2 |
| 398 | Coupling between topology optimization and digital image correlation for the design of specimen dedicated to selected material parameters identification. International Journal of Solids and Structures, 2020, 193-194, 270-286. | 1.3 | 12 |
| 399 | Linear and nonlinear topology optimization design with projectionâ€based ground structure method (Pâ€GSM). International Journal for Numerical Methods in Engineering, 2020, 121, 2437-2461. | 1.5 | 14 |
| 400 | Data-driven design approach to hierarchical hybrid structures with multiple lattice configurations. Structural and Multidisciplinary Optimization, 2020, 61, 2227-2235. | 1.7 | 25 |
| 401 | Topology optimization with accessibility constraint for multi-axis machining. CAD Computer Aided Design, 2020, 122, 102825. | 1.4 | 33 |
| 402 | An adaptive hybrid expansion method (AHEM) for efficient structural topology optimization under harmonic excitation. Structural and Multidisciplinary Optimization, 2020, 61, 895-921. | 1.7 | 12 |

| # | Article | IF | CITATIONS |
|-----|--|-----|-----------|
| 403 | Isogeometric topology optimization based on energy penalization for symmetric structure. Frontiers of Mechanical Engineering, 2020, 15, 100-122. | 2.5 | 12 |
| 404 | Systematic design of high-Q prestressed micro membrane resonators. Computer Methods in Applied Mechanics and Engineering, 2020, 361, 112692. | 3.4 | 13 |
| 405 | Truncated hierarchical B-spline–based topology optimization. Structural and Multidisciplinary Optimization, 2020, 62, 83-105. | 1.7 | 13 |
| 406 | On the Development of a Heterogeneous Mechanical Test Specimen Using Topology Optimization. Procedia Manufacturing, 2020, 47, 816-823. | 1.9 | 3 |
| 407 | Improved proportional topology optimization algorithm for solving minimum compliance problem. Structural and Multidisciplinary Optimization, 2020, 62, 475-493. | 1.7 | 17 |
| 408 | New weight filtering factor of nonlinear design for topology optimization under cyclic loading based on proportional technique. Journal of Mechanical Science and Technology, 2020, 34, 1635-1644. | 0.7 | 2 |
| 409 | Stress-based topology optimization of compliant mechanisms using nonlinear mechanics. Mechanics and Industry, 2020, 21, 304. | 0.5 | 10 |
| 410 | A filter-based level set topology optimization method using a 62-line MATLAB code. Structural and Multidisciplinary Optimization, 2020, 62, 1001-1018. | 1.7 | 22 |
| 411 | Simultaneous topology and build orientation optimization for minimization of additive manufacturing cost and time. International Journal for Numerical Methods in Engineering, 2020, 121, 3442-3481. | 1.5 | 11 |
| 412 | Consistent boundary conditions for PDE filter regularization in topology optimization. Structural and Multidisciplinary Optimization, 2020, 62, 1299-1311. | 1.7 | 31 |
| 413 | A meshless method for topology optimization of structures under multiple load cases. Structures, 2020, 25, 173-179. | 1.7 | 14 |
| 414 | Topology optimization using the unsmooth variational topology optimization (UNVARTOP) method: an educational implementation in MATLAB. Structural and Multidisciplinary Optimization, 2021, 63, 955-981. | 1.7 | 6 |
| 415 | An integrated topology optimization framework for threeâ€dimensional domains using shell elements. Structural Design of Tall and Special Buildings, 2021, 30, . | 0.9 | 9 |
| 416 | Design and modeling of the 2D auxetic metamaterials with hyperelastic properties using topology optimization approach. Photonics and Nanostructures - Fundamentals and Applications, 2021, 43, 100868. | 1.0 | 24 |
| 417 | DL-SCALE: a novel deep learning-based model order upscaling scheme for solving topology optimization problems. Neural Computing and Applications, 2021, 33, 7125-7144. | 3.2 | 8 |
| 418 | Improved proportional topology optimization algorithm for minimum volume problem with stress constraints. Engineering Computations, 2021, 38, 392-412. | 0.7 | 9 |
| 419 | A 101-line MATLAB code for topology optimization using binary variables and integer programming. Structural and Multidisciplinary Optimization, 2021, 63, 935-954. | 1.7 | 30 |
| 420 | 2D topology optimization MATLAB codes for piezoelectric actuators and energy harvesters. Structural and Multidisciplinary Optimization, 2021, 63, 983-1014. | 1.7 | 19 |

| # | Article | IF | CITATIONS |
|-----|--|-----|-----------|
| 421 | Direct lagrange multiplier updates in topology optimization revisited. Structural and Multidisciplinary Optimization, 2021, 63, 1563-1578. | 1.7 | 13 |
| 422 | Computational design of thermo-mechanical metadevices using topology optimization. Applied Mathematical Modelling, 2021, 90, 758-776. | 2.2 | 14 |
| 423 | Image-Based Multiresolution Topology Optimization Using Deep Disjunctive Normal Shape Model. CAD Computer Aided Design, 2021, 130, 102947. | 1.4 | 13 |
| 424 | Topology optimization of imperfect lattice materials built with process-induced defects via Powder Bed Fusion. Additive Manufacturing, 2021, 37, 101608. | 1.7 | 13 |
| 425 | Topological constraints in 2D structural topology optimization. Structural and Multidisciplinary Optimization, 2021, 63, 39-58. | 1.7 | 15 |
| 426 | Manipulation of topologically optimized structures using graphic statics. Materials and Design, 2021, 198, 109286. | 3.3 | 2 |
| 427 | Parallel computing for the topology optimization method: Performance metrics and energy consumption analysis in multiphysics problems. Sustainable Computing: Informatics and Systems, 2021, 30, 100481. | 1.6 | 1 |
| 428 | TOuNN: Topology Optimization using Neural Networks. Structural and Multidisciplinary Optimization, 2021, 63, 1135-1149. | 1.7 | 87 |
| 429 | A densityâ€based boundary evolving method for bucklingâ€induced design under large deformation. International Journal for Numerical Methods in Engineering, 2021, 122, 1770-1796. | 1.5 | 1 |
| 430 | Design of Piezoelectric Actuators By Optimizing the Electrodes Topology. IEEE Robotics and Automation Letters, 2021, 6, 72-79. | 3.3 | 9 |
| 431 | Application research of a structural topology optimization method based on a bionic principle. Engineering Optimization, 2021, 53, 1733-1751. | 1.5 | 2 |
| 432 | Large deformation of TPU re-entrant auxetic structures designed by TO approach. Journal of Elastomers and Plastics, 2021, 53, 347-369. | 0.7 | 15 |
| 433 | Material interface control in multiâ€material topology optimization using pseudoâ€cost domain method. International Journal for Numerical Methods in Engineering, 2021, 122, 455-482. | 1.5 | 9 |
| 434 | An 89-line code for geometrically nonlinear topology optimization written in FreeFEM. Structural and Multidisciplinary Optimization, 2021, 63, 1015-1027. | 1.7 | 23 |
| 435 | Lightweight topology optimization with consideration of the fail-safe design principle for continuum structures. Engineering Optimization, 2021, 53, 32-48. | 1.5 | 15 |
| 436 | Achieving length scale control in topology optimization. , 2021, , . | | 0 |
| 437 | Compact 200 line MATLAB code for inverse design in photonics by topology optimization: tutorial. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 510. | 0.9 | 30 |
| 438 | An Improved Data-Driven Topology Optimization Method Using Feature Pyramid Networks with Physical Constraints. CMES - Computer Modeling in Engineering and Sciences, 2021, 128, 823-848. | 0.8 | 4 |

| # | Article | IF | Citations |
|-----|---|-----|-----------|
| 439 | Topology optimization for additive manufacturing with self-supporting constraint. Structural and Multidisciplinary Optimization, 2021, 63, 2341-2353. | 1.7 | 13 |
| 440 | An efficient 3D homogenization-based topology optimization methodology. Computational Mechanics, 2021, 67, 481-496. | 2.2 | 6 |
| 441 | Two-stage convolutional encoder-decoder network to improve the performance and reliability of deep learning models for topology optimization. Structural and Multidisciplinary Optimization, 2021, 63, 1927-1950. | 1.7 | 41 |
| 442 | Topology optimization of thin-walled cross section using moving morphable components approach. Structural and Multidisciplinary Optimization, 2021, 63, 2159-2176. | 1.7 | 8 |
| 443 | Functionally Graded Cellular Structure Design Using the Subdomain Level Set Method with Local Volume Constraints. CMES - Computer Modeling in Engineering and Sciences, 2021, 128, 1197-1218. | 0.8 | 3 |
| 444 | Topology optimization of partial constrained layer damping treatment on plate for maximizing modal loss factors. Composites and Advanced Materials, 2021, 30, 263498332110348. | 0.5 | 1 |
| 445 | Microstructural topology optimization of periodic beam structures based on the relaxed Saint-Venant solution. Structural and Multidisciplinary Optimization, 2021, 63, 1813-1837. | 1.7 | 2 |
| 446 | Topology Optimisation in Structural Steel Design for Additive Manufacturing. Applied Sciences (Switzerland), 2021, 11, 2112. | 1.3 | 36 |
| 447 | Design Tool for Topology Optimization of Self Supporting Variable Density Lattice Structures for Additive Manufacturing. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2021, 143, . | 1.3 | 10 |
| 448 | A simple way to achieve black-and-white designs in topology optimization. Journal of Physics: Conference Series, 2021, 1798, 012043. | 0.3 | 0 |
| 449 | Topology optimization of self-supporting infill structures. Structural and Multidisciplinary Optimization, 2021, 63, 2289-2304. | 1.7 | 17 |
| 450 | An efficient 137-line MATLAB code for geometrically nonlinear topology optimization using bi-directional evolutionary structural optimization method. Structural and Multidisciplinary Optimization, 2021, 63, 2571-2588. | 1.7 | 22 |
| 451 | Explicit structural topology optimization using moving wide Bezier components with constrained ends. Structural and Multidisciplinary Optimization, 2021, 64, 53-70. | 1.7 | 19 |
| 452 | Efficient, high-resolution topology optimization method based on convolutional neural networks. Frontiers of Mechanical Engineering, 2021, 16, 80-96. | 2.5 | 23 |
| 453 | A globally convergent method to accelerate topology optimization using on-the-fly model reduction. Computer Methods in Applied Mechanics and Engineering, 2021, 375, 113635. | 3.4 | 11 |
| 454 | Surface segmentation design using a weighting level set topology optimization method for large radio telescope antennas. Structural and Multidisciplinary Optimization, 2021, 64, 905-918. | 1.7 | 4 |
| 455 | Simultaneous isotropic and anisotropic multi-material topology optimization for conceptual-level design of aerospace components. Structural and Multidisciplinary Optimization, 2021, 64, 441-456. | 1.7 | 15 |
| 456 | A deep convolutional neural network for topology optimization with perceptible generalization ability. Engineering Optimization, 2022, 54, 973-988. | 1.5 | 24 |

| # | Article | IF | CITATIONS |
|-----|--|-----|-----------|
| 457 | Lagrangian–Eulerian multidensity topology optimization with the material point method. International Journal for Numerical Methods in Engineering, 2021, 122, 3400-3424. | 1.5 | 14 |
| 458 | An Optimization Workflow in Design for Additive Manufacturing. Applied Sciences (Switzerland), 2021, 11, 2572. | 1.3 | 20 |
| 459 | Topology optimisation for large-scale additive manufacturing: generating designs tailored to the deposition nozzle size. Virtual and Physical Prototyping, 2021, 16, 196-220. | 5.3 | 25 |
| 460 | Topology optimization of multi-scale structures: a review. Structural and Multidisciplinary Optimization, 2021, 63, 1455-1480. | 1.7 | 206 |
| 461 | Integral Criterion of the Non-uniformity of Stress Distribution for the Topology Optimization of 2D-Models. Journal of Mechanical Engineering, 2021, 24, 65-74. | 0.1 | 0 |
| 462 | Evolutionary topology optimization for structures made of multiple materials with different properties in tension and compression. Composite Structures, 2021, 259, 113497. | 3.1 | 36 |
| 463 | A Parametric Level Set Method for Topology Optimization Based on Deep Neural Network. Journal of Mechanical Design, Transactions of the ASME, $2021,143,.$ | 1.7 | 31 |
| 464 | Sensitivity Analysis of Key Formulations of Topology Optimization on an Example of Cantilever Bending Beam. Symmetry, 2021, 13, 712. | 1.1 | 9 |
| 465 | Function-aware slicing using principal stress line for toolpath planning in additive manufacturing. Journal of Manufacturing Processes, 2021, 64, 1420-1433. | 2.8 | 20 |
| 466 | Design and experimental verification of self-supporting topologies for selective laser melting. Thin-Walled Structures, 2021, 161, 107419. | 2.7 | 3 |
| 467 | Study of Optimal Cam Design of Dual-Axle Spring-Loaded Camming Device. Materials, 2021, 14, 1940. | 1.3 | 7 |
| 468 | Generative adversarial network for early-stage design flexibility in topology optimization for additive manufacturing. Journal of Manufacturing Systems, 2021, 59, 675-685. | 7.6 | 22 |
| 469 | A projective transformation-based topology optimization using moving morphable components. Computer Methods in Applied Mechanics and Engineering, 2021, 376, 113646. | 3.4 | 7 |
| 470 | Optimization of sound transmission loss of open acoustic barriers with respect to unit cell topology. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2021, 235, 5962-5974. | 1.1 | 1 |
| 471 | Topology optimization with linearized buckling criteria in 250 lines of Matlab. Structural and Multidisciplinary Optimization, 2021, 63, 3045-3066. | 1.7 | 34 |
| 472 | Fictitious domain models for topology optimization of time-harmonic problems. Structural and Multidisciplinary Optimization, 2021, 64, 871. | 1.7 | 0 |
| 473 | Spectral decomposition for graded multi-scale topology optimization. Computer Methods in Applied Mechanics and Engineering, 2021, 377, 113670. | 3.4 | 7 |
| 474 | Topology optimization with discrete geometric components made of composite materials. Computer Methods in Applied Mechanics and Engineering, 2021, 376, 113582. | 3.4 | 21 |

| # | Article | IF | Citations |
|-----|--|-----|-----------|
| 475 | Topology optimization of hyperelastic structures with anisotropic fiber reinforcement under large deformations. Computer Methods in Applied Mechanics and Engineering, 2021, 378, 113496. | 3.4 | 19 |
| 476 | On approaches for avoiding low-stiffness regions in variable thickness sheet and homogenization-based topology optimization. Structural and Multidisciplinary Optimization, 2021, 64, 39-52. | 1.7 | 11 |
| 477 | Design optimization of multimorphology surface-based lattice structures with density gradients. International Journal of Advanced Manufacturing Technology, 2021, 117, 2013-2028. | 1.5 | 17 |
| 478 | Acceleration Design for Continuum Topology Optimization by Using Pix2pix Neural Network. International Journal of Applied Mechanics, 2021, 13, 2150042. | 1.3 | 12 |
| 479 | A NON-GRADIENT APPROACH FOR THREE DIMENSIONAL TOPOLOGY OPTIMIZATION. Science and Technology, 2021, 59, 368. | 0.1 | 3 |
| 480 | Topology optimization of degradable composite structures with timeâ€changeable stiffness. International Journal for Numerical Methods in Engineering, 2021, 122, 4751-4773. | 1.5 | 4 |
| 481 | Projection-Based Implicit Modeling Method (PIMM) for Functionally Graded Lattice Optimization. Jom, 2021, 73, 2012-2021. | 0.9 | 4 |
| 482 | Fast multiscale contrast independent preconditioners for linear elastic topology optimization problems. Journal of Computational and Applied Mathematics, 2021, 389, 113366. | 1.1 | 2 |
| 483 | Topology Optimization of Hard-Coating Thin Plate for Maximizing Modal Loss Factors. Coatings, 2021, 11, 774. | 1.2 | 8 |
| 484 | Overhang control in topology optimization: a comparison of continuous front propagation-based and discrete layer-by-layer overhang control. Structural and Multidisciplinary Optimization, 2021, 64, 761. | 1.7 | 11 |
| 485 | Real-Time Topology Optimization in 3D via Deep Transfer Learning. CAD Computer Aided Design, 2021, 135, 103014. | 1.4 | 19 |
| 486 | Simultaneous topology and deposition direction optimization for Wire and Arc Additive Manufacturing. Manufacturing Letters, 2022, 31, 45-51. | 1.1 | 8 |
| 487 | Momentumâ€based accelerated mirror descent stochastic approximation for robust topology optimization under stochastic loads. International Journal for Numerical Methods in Engineering, 2021, 122, 4431-4457. | 1.5 | 7 |
| 488 | lbIPP for topology optimizationâ€"An Image-based Initialization and Post-Processing code written in MATLAB. SoftwareX, 2021, 14, 100701. | 1.2 | 13 |
| 489 | Integrating deep learning into CAD/CAE system: generative design and evaluation of 3D conceptual wheel. Structural and Multidisciplinary Optimization, 2021, 64, 2725-2747. | 1.7 | 46 |
| 490 | Topology optimization and additive manufacturing in the building and construction industry. IOP Conference Series: Materials Science and Engineering, 2021, 1154, 012029. | 0.3 | 0 |
| 491 | Smart Topology Optimization Using Adaptive Neighborhood Simulated Annealing. Applied Sciences (Switzerland), 2021, 11, 5257. | 1.3 | 15 |
| 492 | TopADD: a 2D/3D integrated topology optimization parallel-computing framework for arbitrary design domains. Structural and Multidisciplinary Optimization, 2021, 64, 1701-1723. | 1.7 | 10 |

| # | Article | IF | CITATIONS |
|-----|--|-----|-----------|
| 493 | Multi-material topology optimization of piezoelectric composite structures for energy harvesting. Composite Structures, 2021, 265, 113783. | 3.1 | 28 |
| 494 | Stress-based and robust topology optimization for thermoelastic multi-material periodic microstructures. Computer Methods in Applied Mechanics and Engineering, 2021, 379, 113749. | 3.4 | 39 |
| 495 | Topology optimization of tie-down structure for transportation of metal cask containing spent nuclear fuel. Nuclear Engineering and Technology, 2021, 53, 2268-2276. | 1.1 | 3 |
| 496 | On a cellular developmental method for layout optimization via the two-point topological derivative. Structural and Multidisciplinary Optimization, 2021, 64, 2343. | 1.7 | 3 |
| 497 | Enhancing Design for Additive Manufacturing Workflow: Optimization, Design and Simulation Tools. Applied Sciences (Switzerland), 2021, 11, 6628. | 1.3 | 14 |
| 498 | Multi-Material Topology Optimization Using Neural Networks. CAD Computer Aided Design, 2021, 136, 103017. | 1.4 | 32 |
| 499 | Robust topological designs for extreme metamaterial micro-structures. Scientific Reports, 2021, 11, 15221. | 1.6 | 11 |
| 500 | Shape optimization of periodic-microstructures for stiffness maximization of a macrostructure. Composite Structures, 2021, 268, 113873. | 3.1 | 16 |
| 501 | Reliability-based topology optimization with stochastic heterogeneous microstructure properties. Materials and Design, 2021, 205, 109713. | 3.3 | 9 |
| 502 | Stress-cognizant 3D printing of free-form concrete structures. Journal of Building Engineering, 2021, 39, 102221. | 1.6 | 7 |
| 503 | Topology optimization and geometric nonlinear modeling using positional finite elements. Optimization and Engineering, 0, , $1.$ | 1.3 | 2 |
| 504 | Complementary lecture notes for teaching the 99/88-line topology optimization codes. Structural and Multidisciplinary Optimization, 2021, 64, 3227-3231. | 1.7 | 4 |
| 505 | A Novel Method for Structural Lightweight Design with Topology Optimization. Energies, 2021, 14, 4367. | 1.6 | 6 |
| 506 | A New Topology Optimization Approach by Physics-Informed Deep Learning Process. Advances in Science, Technology and Engineering Systems, 2021, 6, 233-240. | 0.4 | 4 |
| 507 | Simultaneous Layout and Topology Optimization of Curved Stiffened Panels. AIAA Journal, 2021, 59, 2768-2783. | 1.5 | 16 |
| 508 | On a cellular developmental method for layout optimization via multi-fidelity analyses and the two-point topological derivative. , 2021 , , . | | 0 |
| 509 | Local versus global stress constraint strategies in topology optimization: A comparative study. International Journal for Numerical Methods in Engineering, 2021, 122, 6003-6036. | 1.5 | 34 |
| 510 | Topology-Optimization-Based Learning: A Powerful Teaching and Learning Framework under the Prism of the CDIO Approach. Education Sciences, 2021, 11, 348. | 1.4 | 3 |

| # | Article | IF | Citations |
|-----|--|-----|-----------|
| 511 | Topology optimization in concrete construction: a systematic review on numerical and experimental investigations. Structural and Multidisciplinary Optimization, 2021, 64, 1725-1749. | 1.7 | 35 |
| 512 | LayOpt: an educational web-app for truss layout optimization. Structural and Multidisciplinary Optimization, 2021, 64, 2805-2823. | 1.7 | 14 |
| 513 | A MATLAB code for the material-field series-expansion topology optimization method. Frontiers of Mechanical Engineering, 2021, 16, 607-622. | 2.5 | 11 |
| 514 | A SIMP-phase field topology optimization framework to maximize quasi-brittle fracture resistance of 2D and 3D composites. Theoretical and Applied Fracture Mechanics, 2021, 114, 102919. | 2.1 | 21 |
| 515 | Finite periodic topology optimization with oriented unit-cells. Structural and Multidisciplinary Optimization, 2021, 64, 1765-1779. | 1.7 | 8 |
| 516 | Robust topology optimization of multi-material structures under load uncertainty using the alternating active-phase method. Composite Structures, 2021, 270, 114065. | 3.1 | 8 |
| 517 | Robust topology optimization for structures under bounded random loads and material uncertainties. Computers and Structures, 2021, 252, 106569. | 2.4 | 24 |
| 518 | Robust topology optimization with low rank approximation using artificial neural networks. Computational Mechanics, 2021, 68, 1297-1323. | 2.2 | 4 |
| 519 | A well connected, locally-oriented and efficient multi-scale topology optimization (EMTO) strategy. Structural and Multidisciplinary Optimization, 2021, 64, 3705-3728. | 1.7 | 8 |
| 520 | Topology optimization of sandwich structures with solid-porous hybrid infill under geometric constraints. Computer Methods in Applied Mechanics and Engineering, 2021, 382, 113856. | 3.4 | 12 |
| 521 | Coupled topology and shape optimization using an embedding domain discretization method. Structural and Multidisciplinary Optimization, 2021, 64, 2687-2707. | 1.7 | 8 |
| 522 | Multi-stage deep neural network accelerated topology optimization. Structural and Multidisciplinary Optimization, 2021, 64, 3473-3487. | 1.7 | 12 |
| 523 | An efficient 146-line 3D sensitivity analysis code of stress-based topology optimization written in MATLAB. Optimization and Engineering, 2022, 23, 1733-1757. | 1.3 | 21 |
| 524 | Offshore Platform Topsides Structural Design: Using Topology Optimization to Generate Novel Design Concept., 2021,,. | | 0 |
| 525 | Topology optimization for fail-safe designs using moving morphable components as a representation of damage. Structural and Multidisciplinary Optimization, 2021, 64, 2307-2321. | 1.7 | 14 |
| 526 | Topology Optimization Methods for 3D Structural Problems: A Comparative Study. Archives of Computational Methods in Engineering, 2022, 29, 1525-1567. | 6.0 | 14 |
| 527 | Reaction–diffusion equation-based topology optimization code for electromagnetic wave problems using FreeFEM++. Structural and Multidisciplinary Optimization, 2021, 64, 4367-4385. | 1.7 | 5 |
| 528 | Effects of infill patterns on the strength and stiffness of 3D printed topologically optimized geometries. Rapid Prototyping Journal, 2021, 27, 1467-1479. | 1.6 | 7 |

| # | Article | IF | CITATIONS |
|-----|--|-----|-----------|
| 529 | IgaTop: an implementation of topology optimization for structures using IGA in MATLAB. Structural and Multidisciplinary Optimization, 2021, 64, 1669-1700. | 1.7 | 21 |
| 530 | Bézier extraction based isogeometric approach to multiâ€objective topology optimization of periodic microstructures. International Journal for Numerical Methods in Engineering, 2021, 122, 6827-6866. | 1.5 | 8 |
| 531 | Topology optimization using PETSc: a Python wrapper and extended functionality. Structural and Multidisciplinary Optimization, 2021, 64, 4343-4353. | 1.7 | 3 |
| 532 | An Aggregation-Free Local Volume Fraction Formulation for Topological Design of Porous Structure. Materials, 2021, 14, 5726. | 1.3 | 8 |
| 533 | QSPcc reduces bottlenecks in computational model simulations. Communications Biology, 2021, 4, 1022. | 2.0 | 2 |
| 534 | On the preliminary shape design of axisymmetric twin-web turbine discs considering the burst speed constraint. Engineering Optimization, 2022, 54, 2071-2086. | 1.5 | 4 |
| 535 | MATLAB implementations of velocity field level set method for topology optimization: an 80-line code for 2D and a 100-line code for 3D problems. Structural and Multidisciplinary Optimization, 2021, 64, 4325-4342. | 1.7 | 14 |
| 536 | Strut-and-tie models obtained by way of topological optimisation. Proceedings of the Institution of Civil Engineers: Structures and Buildings, 0 , $1-12$. | 0.4 | 1 |
| 537 | A channel layout of a micro pulsating heat pipe for an excessively localized heating condition. Applied Thermal Engineering, 2021, 196, 117266. | 3.0 | 16 |
| 538 | A high-level programming language implementation of topology optimization applied to the acoustic-structure interaction problem. Structural and Multidisciplinary Optimization, 2021, 64, 4387-4408. | 1.7 | 4 |
| 539 | An Artificial Intelligence–Assisted Design Method for Topology Optimization without Pre-Optimized Training Data. Applied Sciences (Switzerland), 2021, 11, 9041. | 1.3 | 10 |
| 540 | Robust topology optimization for fiber-reinforced composite structures under loading uncertainty. Computer Methods in Applied Mechanics and Engineering, 2021, 384, 113935. | 3.4 | 20 |
| 541 | Multi-material topology optimisation of micro-composites with reduced stress concentration for optimal functional performance. Materials and Design, 2021, 210, 110098. | 3.3 | 17 |
| 542 | Bi-material microstructural design of biodegradable composites using topology optimization. Materials and Design, 2021, 209, 109973. | 3.3 | 9 |
| 543 | HYIMFO: Hybrid method for optimizing fiber orientation angles in laminated piezocomposite actuators. Computer Methods in Applied Mechanics and Engineering, 2021, 385, 114010. | 3.4 | 6 |
| 544 | Optimisation of three-dimensional hierarchical structures with tailored lattice metamaterial anisotropy. Materials and Design, 2021, 210, 110083. | 3.3 | 9 |
| 545 | Designing and tailoring effective elastic modulus and negative Poisson's ratio with continuous carbon fibres using 3D printing. Composites Part A: Applied Science and Manufacturing, 2021, 150, 106625. | 3.8 | 27 |
| 546 | Topology optimization and de-homogenization of graded lattice structures based on asymptotic homogenization. Composite Structures, 2021, 277, 114633. | 3.1 | 16 |

| # | Article | IF | CITATIONS |
|-----|---|-----|-----------|
| 547 | Multi-material topology optimization considering joint stiffness using a two-step filtering approach. Finite Elements in Analysis and Design, 2021, 197, 103635. | 1.7 | 8 |
| 548 | TONR: An exploration for a novel way combining neural network with topology optimization. Computer Methods in Applied Mechanics and Engineering, 2021, 386, 114083. | 3.4 | 33 |
| 549 | Simultaneously optimizing supports and topology in structural design. Finite Elements in Analysis and Design, 2021, 197, 103633. | 1.7 | 11 |
| 550 | Topology Optimization for Manufacturing with Accessible Support Structures. CAD Computer Aided Design, 2022, 142, 103117. | 1.4 | 19 |
| 551 | Shape and topology optimization. Handbook of Numerical Analysis, 2021, 22, 1-132. | 0.9 | 44 |
| 552 | Accelerated projected gradient method with adaptive step size for compliance minimization problem. JSIAM Letters, 2021, 13, 33-36. | 0.3 | 5 |
| 553 | Multi-resolution topology optimization using adaptive isosurface variable grouping (MTOP-aIVG) for enhanced computational efficiency. Structural and Multidisciplinary Optimization, 2021, 63, 1743-1766. | 1.7 | 8 |
| 554 | Multilevel Designed Quadrature for Partial Differential Equations with Random Inputs. SIAM Journal of Scientific Computing, 2021, 43, A1412-A1440. | 1.3 | 1 |
| 555 | The Result: A New Design Paradigm. , 2017, , 301-334. | | 1 |
| 556 | Canonical Duality Theory for Topology Optimization. Advances in Mechanics and Mathematics, 2017, , 263-276. | 0.2 | 3 |
| 557 | Efficient Density Based Topology Optimization Using Dual-Layer Element and Variable Grouping Method for Large 3D Applications., 2018,, 967-978. | | 2 |
| 558 | Solving 2D/3D Heat Conduction Problems by Combining Topology Optimization and Anisotropic Mesh Adaptation. , 2018, , 1224-1238. | | 3 |
| 559 | Topology Optimization Using Multiscale Finite Element Method for High-Contrast Media. Lecture Notes in Computer Science, 2014, , 339-346. | 1.0 | 10 |
| 560 | An efficient second-order SQP method for structural topology optimization. , 2016, 53, 1315. | | 1 |
| 561 | Deep learning for determining a near-optimal topological design without any iteration., 2019, 59, 787. | | 1 |
| 562 | A comprehensive review of educational articles on structural and multidisciplinary optimization. Structural and Multidisciplinary Optimization, 2021, 64, 2827-2880. | 1.7 | 57 |
| 563 | Topology Synthesis and Optimal Design of an Adaptive Compliant Gripper to Maximize Output Displacement. Journal of Intelligent and Robotic Systems: Theory and Applications, 2018, 90, 287-304. | 2.0 | 43 |
| 564 | Design of mechanical heterogeneous specimens using topology optimization. International Journal of Mechanical Sciences, 2020, 181, 105764. | 3.6 | 17 |

| # | Article | IF | Citations |
|-----|---|-----|-----------|
| 565 | Multi-physics topology optimization of functionally graded controllable porous structures: Application to heat dissipating problems. Materials and Design, 2020, 193, 108775. | 3.3 | 53 |
| 566 | Convolutional Neural Network Surrogate Models for the Mechanical Properties of Periodic Structures. Journal of Mechanical Design, Transactions of the ASME, 2020, 142, . | 1.7 | 21 |
| 567 | Shared-Gaussian Process: Learning Interpretable Shared Hidden Structure Across Data Spaces for Design Space Analysis and Exploration. Journal of Mechanical Design, Transactions of the ASME, 2020, 142, . | 1.7 | 11 |
| 568 | Reinforcement of General Shell Structures. ACM Transactions on Graphics, 2020, 39, 1-19. | 4.9 | 12 |
| 569 | A firefly algorithm based hybrid method for structural topology optimization. Advanced Modeling and Simulation in Engineering Sciences, 2020, 7, . | 0.7 | 3 |
| 570 | Topology optimization of two-dimensional beams: a comparative study. Contemporary Engineering Sciences, 2018, 11, 5075-5080. | 0.2 | 1 |
| 571 | Topological material distribution evaluation for steel plate reinforcement by using CCARAT optimizer. Structural Engineering and Mechanics, 2014, 51, 793-808. | 1.0 | 2 |
| 572 | Dimensionality reduction enhances data-driven reliability-based design optimize. Journal of Advanced Mechanical Design, Systems and Manufacturing, 2020, 14, JAMDSM0008-JAMDSM0008. | 0.3 | 2 |
| 573 | Efficient Combination of Topology and Parameter Optimization. Open Journal of Optimization, 2014, 03, 19-25. | 0.3 | 5 |
| 574 | Application of Adversarial Networks for 3D Structural Topology Optimization. , 0, , . | | 18 |
| 575 | Robust design of large-displacement compliant mechanisms. Mechanical Sciences, 2011, 2, 175-182. | 0.5 | 64 |
| 576 | An XBi-CFAO Method for the Optimization of Multi-Layered Variable Stiffness Composites Using Isogeometric Analysis. CMES - Computer Modeling in Engineering and Sciences, 2021, 129, 627-659. | 0.8 | 1 |
| 577 | Soft Hybrid Aerial Vehicle via Bistable Mechanism., 2021,,. | | 3 |
| 578 | Multi-material topology optimization of large-displacement compliant mechanisms considering material-dependent boundary condition. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2022, 236, 2847-2860. | 1.1 | 2 |
| 579 | A boundary density evolutionary topology optimization of continuum structures with smooth boundaries. International Journal for Numerical Methods in Engineering, 2022, 123, 158-179. | 1.5 | 3 |
| 580 | Topology optimization based on the high-order numerical manifold method by implementing a four-node quadrilateral element. Engineering Optimization, 2023, 55, 89-109. | 1.5 | 1 |
| 581 | Topology Optimization via Frequency Tuning of Neural Design Representations. , 2021, , . | | 3 |
| 582 | On some applications of Generalized Geometric Projection to optimal 3D printing. Computers and Graphics, 2021, 102, 199-199. | 1.4 | 2 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 583 | Integrated topology and packaging optimization using coupled material and component pseudo-densities. Structural and Multidisciplinary Optimization, 2021, 64, 3345-3380. | 1.7 | 2 |
| 584 | An ODE-driven level-set density method for topology optimization. Computer Methods in Applied Mechanics and Engineering, 2021, 387, 114159. | 3.4 | 7 |
| 586 | Topology optimization of a wing structure. , 2014, , 507-512. | | 0 |
| 587 | Generation of OC and MMA topology optimizer by using accelerating design variables. Structural Engineering and Mechanics, 2015, 55, 901-911. | 1.0 | 0 |
| 589 | EVOLUTIONARY TOPOLOGY OPIMIZATION USING PARAMETERIZED B-SPLINE SURFACE., 2016, , . | | 1 |
| 590 | DESIGNING MANUFACTURABLE VISCOELASTIC DEVICES USING A TOPOLOGY OPTIMIZATION APPROACH WITHIN A TRULY-MIXED FEM FRAMEWORK. , 2016, , . | | 0 |
| 591 | 3D-Printing, Topology Optimization and Statistical Learning: A Case Study. , 2017, , . | | 2 |
| 592 | Topology Optimization based on Monte Carlo Analysis. Journal of the Computational Structural Engineering Institute of Korea, 2017, 30, 153-158. | 0.1 | 0 |
| 594 | A Novel Heuristic Generator of Structural Topologies Based on Sorted Compliances. , 2018, , 1296-1305. | | 0 |
| 595 | Topological optimization using particles swarm metaheuristic. IngenierÃa Y Desarrollo, 2018, 36, 343-358. | 0.0 | 0 |
| 596 | Topology Optimization using Explicit Stress Tensor Analysis. Computer-Aided Design and Applications, 2018, 16, . | 0.4 | 0 |
| 597 | Learn to Learn: Application to Topology Optimization. Smart and Sustainable Manufacturing Systems, 2018, 2, 20180039. | 0.3 | 0 |
| 598 | Topology Optimization of the Turbine Disk Structure under Thermomechanical Loads. Proceedings of Higher Educational Institutions ĐœĐ°chine Building, 2019, , 60-70. | 0.1 | 1 |
| 599 | Continuous Timber Fibre Placement. , 2020, , 460-473. | | 3 |
| 600 | Stress-Constrained Topology Optimization for Lattice Materials. , 2020, , 2342-2361. | | 0 |
| 601 | Comparison of heuristics and metaheuristics for topology optimisation in acoustic porous materials. Journal of the Acoustical Society of America, 2021, 150, 3164-3175. | 0.5 | 6 |
| 602 | Structural Topology Optimization: Methods and Applications. Lecture Notes in Mechanical Engineering, 2020, , 643-654. | 0.3 | 0 |
| 603 | Multi-fidelity Optimization Approach Under Prior and Posterior Constraints and Its Application to Compliance Minimization. Lecture Notes in Computer Science, 2020, , 81-94. | 1.0 | 3 |

| # | Article | IF | Citations |
|-----|--|-----|-----------|
| 604 | Topology Optimization of Rigid-Body Systems Considering Collision Avoidance. Journal of Mechanical Design, Transactions of the ASME, 2020, 142, . | 1.7 | 4 |
| 605 | Unit Module-Based Convergence Acceleration for Topology Optimization Using the Spatiotemporal Deep Neural Network. IEEE Access, 2021, 9, 149766-149779. | 2.6 | 5 |
| 606 | A Study on Proportional Topology Optimization for Nonlinearities Material with Cyclic Load. International Journal of Materials Science and Engineering, 2020, 8, 7-14. | 0.1 | 0 |
| 608 | Data-driven multiscale design of cellular composites with multiclass microstructures for natural frequency maximization. Composite Structures, 2022, 280, 114949. | 3.1 | 16 |
| 609 | Scalable Gaussian Process Regression Networks. , 2020, , . | | 1 |
| 610 | Data-Driven Additive Manufacturing Constraints for Topology Optimization. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2021, 143, . | 1.3 | 6 |
| 611 | Deep learning driven real time topology optimisation based on initial stress learning. Advanced Engineering Informatics, 2022, 51, 101472. | 4.0 | 17 |
| 612 | Encoding and exploring latent design space of optimal material structures via a VAE-LSTM model. Forces in Mechanics, 2021, 5, 100054. | 1.3 | 14 |
| 613 | Simultaneous optimization of topology and layout of modular stiffeners on shells and plates. Structural and Multidisciplinary Optimization, 2021, 64, 3147-3161. | 1.7 | 6 |
| 614 | Design of prefabricated footing connection using a coupled hydroâ€mechanical finite element model. Structural Concrete, 2022, 23, 2669-2695. | 1.5 | 2 |
| 615 | Topological Design of Multi-Material Compliant Mechanisms with Global Stress Constraints. Micromachines, 2021, 12, 1379. | 1.4 | 5 |
| 616 | An intelligent algorithm for topology optimization in additive manufacturing. International Journal of Advanced Manufacturing Technology, 2022, 119, 991-1001. | 1.5 | 7 |
| 617 | Topology Optimization of Deformable Bodies with Linear Dynamic Impact and Frictionless Contact Condition. Applied Sciences (Switzerland), 2021, 11, 10518. | 1.3 | 1 |
| 618 | Reliability-based topology optimization of piezoelectric smart structures with voltage uncertainty. Journal of Intelligent Material Systems and Structures, 2022, 33, 1975-1989. | 1.4 | 7 |
| 619 | Topological control for 2D minimum compliance topology optimization using SIMP method. Structural and Multidisciplinary Optimization, 2022, 65, 1. | 1.7 | 12 |
| 620 | A Comparative Study of the Application of Different Commercial Software for Topology Optimization. Applied Sciences (Switzerland), 2022, 12, 611. | 1.3 | 13 |
| 621 | CAD-integrated topology optimization method with dynamic extrusion feature evolution for multi-axis machining. Computer Methods in Applied Mechanics and Engineering, 2022, 390, 114456. | 3.4 | 3 |
| 622 | Seismic topology optimization based on spectral approaches. Journal of Building Engineering, 2022, 47, 103781. | 1.6 | 1 |

| # | Article | IF | CITATIONS |
|-----|---|-----|-----------|
| 623 | A Novel Mathematical Formulation for Density-Based Topology Optimization Method Considering Multi-Axis Machining Constraint. Journal of Mechanical Design, Transactions of the ASME, 2022, 144, . | 1.7 | 2 |
| 624 | Topology design and equivalent mechanical properties of a three-dimensional star-shaped auxetic structure. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, 0, , 146442072110683. | 0.7 | 2 |
| 625 | PRIMAL-DUAL ALGORITHM FOR QUASI-STATIC CONTACT PROBLEM WITH COULOMB'S FRICTION. Journal of the Operations Research Society of Japan, 2022, 65, 1-22. | 0.3 | 1 |
| 626 | Topology optimization with variable loads and supports using a super-Gaussian projection function. Structural and Multidisciplinary Optimization, 2022, 65, 1. | 1.7 | 4 |
| 627 | Exploring a Multiscale Topology Optimization Design Space Using a Parametric L-system Approach., 2022,,. | | 0 |
| 628 | A partition and microstructure based method applicable to large-scale topology optimization. Mechanics of Materials, 2022, 166, 104234. | 1.7 | 3 |
| 629 | An advection–diffusion based filter for machinable designs in topology optimization. Computer Methods in Applied Mechanics and Engineering, 2022, 391, 114488. | 3.4 | 5 |
| 630 | Eigenvectors-guided topology optimization to control the mode shape and suppress the vibration of the multi-material plate. Computer Methods in Applied Mechanics and Engineering, 2022, 391, 114560. | 3.4 | 6 |
| 631 | Design and optimization of variable stiffness piezoelectric energy harvesters. Composite Structures, 2022, 285, 115204. | 3.1 | 4 |
| 632 | Multi-material gradient-free proportional topology optimization analysis for plates with variable thickness. Structural and Multidisciplinary Optimization, 2022, 65, 1. | 1.7 | 9 |
| 633 | Hybrid explicit–implicit topology optimization method for the integrated layout design of compliant mechanisms and actuators. Mechanism and Machine Theory, 2022, 171, 104750. | 2.7 | 8 |
| 634 | Robustly printable freeform thermal metamaterials. Nature Communications, 2021, 12, 7228. | 5.8 | 64 |
| 635 | Improving Mechanical Ice Protection Systems with Substrate Parametric and Topology Optimization. SSRN Electronic Journal, 0, , . | 0.4 | 1 |
| 636 | Topology Optimization of Self-Supporting Structures for Additive Manufacturing with Adaptive Explicit Continuous Constraint. CMES - Computer Modeling in Engineering and Sciences, 2022, 131, 1-19. | 0.8 | 1 |
| 637 | A machine learning-assisted structural optimization scheme for fast-tracking topology optimization. Structural and Multidisciplinary Optimization, 2022, 65, 1. | 1.7 | 4 |
| 638 | A meshfree-based topology optimization approach without calculation of sensitivity. Vietnam Journal of Mechanics, 2022, 44, 45-58. | 0.2 | 3 |
| 639 | Evolutionary topology optimization for continuum structures using isogeometric analysis. Structural and Multidisciplinary Optimization, 2022, 65, 1. | 1.7 | 6 |
| 640 | A nodalâ€based evolutionary optimization algorithm for frame structures. Computer-Aided Civil and Infrastructure Engineering, 2023, 38, 288-306. | 6.3 | 6 |

| # | Article | IF | CITATIONS |
|-----|--|-----|-----------|
| 641 | The Influence of Uncertain Loading on Topology-Optimized Designs. Mathematical Problems in Engineering, 2022, 2022, 1-13. | 0.6 | 0 |
| 642 | Maximizing sound transmission loss using thickness optimization based on the elementary radiator approach. Structural and Multidisciplinary Optimization, 2022, 65 , 1 . | 1.7 | 2 |
| 643 | Topology optimization of multi-gradient composite. Computer Methods in Applied Mechanics and Engineering, 2022, 393, 114751. | 3.4 | 2 |
| 644 | Quantile-based topology optimization under uncertainty using Kriging metamodel. Computer Methods in Applied Mechanics and Engineering, 2022, 393, 114690. | 3.4 | 8 |
| 645 | An improved ordered SIMP approach for multiscale concurrent topology optimization with multiple microstructures. Composite Structures, 2022, 287, 115363. | 3.1 | 27 |
| 646 | Topology optimization for enhanced dynamic fracture resistance of structures. Computer Methods in Applied Mechanics and Engineering, 2022, 394, 114846. | 3.4 | 8 |
| 647 | A simple and versatile topology optimization formulation for flexure synthesis. Mechanism and Machine Theory, 2022, 172, 104743. | 2.7 | 8 |
| 648 | Multi-scale and multi-material topology optimization of gradient lattice structures using surrogate models. Composite Structures, 2022, 289, 115402. | 3.1 | 11 |
| 649 | Marching cubes-based isogeometric topology optimization method with parametric level set. Applied Mathematical Modelling, 2022, 107, 275-295. | 2.2 | 8 |
| 650 | Design of component structure in assemblies for simultaneously regulating contact pressure distribution and natural frequencies. European Journal of Mechanics, A/Solids, 2022, 94, 104557. | 2.1 | 5 |
| 651 | Study with topology optimization domains in two-dimensional algorithms. The Academic Society Journal, 0, , 165-176. | 0.1 | 1 |
| 652 | An improved optimality criterion combined with density filtering method for structural topology optimization. Engineering Optimization, 2023, 55, 416-433. | 1.5 | 5 |
| 653 | Deep Learning-Based Accuracy Upgrade of Reduced Order Models in Topology Optimization. Applied Sciences (Switzerland), 2021, 11, 12005. | 1.3 | 6 |
| 654 | Robust topology optimization of a flexural structure considering multi-stress performance for force sensing and structural safety. Structural and Multidisciplinary Optimization, 2022, 65, 1. | 1.7 | 3 |
| 655 | Robust topology optimization of biodegradable composite structures under uncertain degradation rates. Composite Structures, 2022, 291, 115593. | 3.1 | 2 |
| 656 | Strength-constrained simultaneous optimization of topology and fiber orientation of fiber-reinforced composite structures for additive manufacturing. Advances in Structural Engineering, 2022, 25, 1636-1651. | 1.2 | 9 |
| 657 | Integrated topology and packaging optimization for multi-phase multi-component problems. Structural and Multidisciplinary Optimization, 2022, 65, 1. | 1.7 | 1 |
| 658 | Cross-resolution topology optimization for geometrical non-linearity by using deep learning. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 5 |

| # | Article | IF | CITATIONS |
|-----|---|-----|-----------|
| 659 | Material Design with Topology Optimization Based on the Neural Network. International Journal of Computational Methods, 2022, 19 , . | 0.8 | 1 |
| 660 | Improving mechanical ice protection systems with topology optimization. Structural and Multidisciplinary Optimization, 2022, $65, 1$. | 1.7 | 1 |
| 661 | On the Indispensability of Isogeometric Analysis in Topology Optimization for Smooth or Binary Designs. Symmetry, 2022, 14, 845. | 1,1 | 2 |
| 662 | Experimental investigations of the effectiveness of simultaneous topology/orientation optimization via SOMP and principal stress directions. Materials and Design, 2022, 217, 110647. | 3.3 | 2 |
| 663 | HoneyTop90: A 90-line MATLAB code for topology optimization using honeycomb tessellation. Optimization and Engineering, 2023, 24, 1433-1460. | 1.3 | 8 |
| 665 | An efficient and easy-to-extend Matlab code of the Moving Morphable Component (MMC) method for three-dimensional topology optimization. Structural and Multidisciplinary Optimization, 2022, 65, 1. | 1.7 | 30 |
| 666 | Simultaneous topology and fiber path optimization of composite structures with MAC constraints. Composite Structures, 2022, 294, 115645. | 3.1 | 6 |
| 667 | Modular-topology optimization of structures and mechanisms with free material design and clustering. Computer Methods in Applied Mechanics and Engineering, 2022, 395, 114977. | 3.4 | 9 |
| 668 | A passive load alleviation aircraft wing: topology optimization for maximizing nonlinear bending–torsion coupling. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 5 |
| 669 | Adaptive isogeometric topology optimization using PHT splines. Computer Methods in Applied Mechanics and Engineering, 2022, 395, 114993. | 3.4 | 8 |
| 670 | Approximate Length Scale Filter in Topology Optimization using Fourier Enhanced Neural Networks. CAD Computer Aided Design, 2022, 150, 103277. | 1.4 | 7 |
| 671 | A new three-level mesh method to accelerate the structural topology optimization. Applied Mathematical Modelling, 2022, 109, 374-400. | 2.2 | 8 |
| 672 | IH-GAN: A conditional generative model for implicit surface-based inverse design of cellular structures. Computer Methods in Applied Mechanics and Engineering, 2022, 396, 115060. | 3.4 | 22 |
| 674 | Automatic Design of Dielectric Elastomer-Based Crawling Robots Using Shape and Topology Optimization. Journal of Mechanisms and Robotics, 2023, 15, . | 1.5 | 4 |
| 675 | An Al-Assisted Design Method for Topology Optimization without Pre-Optimized Training Data. Proceedings of the Design Society, 2022, 2, 1589-1598. | 0.5 | 0 |
| 676 | Controlling local overheating in topology optimization for additive manufacturing. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 8 |
| 677 | Data-Driven M-Vcut Topology Optimization Method for Heat Conduction Problem of Cellular Structure with Multiple Microstructure Prototypes. SSRN Electronic Journal, 0, , . | 0.4 | 0 |
| 678 | Ecodesign with topology optimization. Procedia CIRP, 2022, 109, 454-459. | 1.0 | 4 |

| # | Article | IF | CITATIONS |
|-----|--|-----|-----------|
| 679 | An SQP Algorithm for Structural Topology Optimization Based on Majorization–Minimization Method. Applied Sciences (Switzerland), 2022, 12, 6304. | 1.3 | 2 |
| 680 | Geometry and size optimization of stiffener layout for three-dimensional box structures with maximization of natural frequencies. Chinese Journal of Aeronautics, 2023, 36, 324-341. | 2.8 | 1 |
| 681 | Multi-functional topology optimization of <i>Victoria cruziana </i> veins. Journal of the Royal Society Interface, 2022, 19, . | 1.5 | 4 |
| 682 | Proportional topology optimisation with maximum entropy-based meshless method for minimum compliance and stress constrained problems. Engineering With Computers, 2022, 38, 5541-5561. | 3.5 | 8 |
| 683 | Design for drainability in density-based topology optimization. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 0 |
| 684 | A phase field-based systematic multiscale topology optimization method for porous structures design. Journal of Computational Physics, 2022, 466, 111383. | 1.9 | 16 |
| 685 | Multi-Head Self-Attention GANs for Multiphysics Topology Optimization. , 2022, , . | | 0 |
| 686 | An Adaptive Generalized Multiscale Finite Element Method Based Two-Grid Preconditioner for Large Scale High-Contrast Linear Elasticity Problems. Journal of Scientific Computing, 2022, 92, . | 1.1 | 0 |
| 687 | Isogeometric topology optimization of strain gradient materials. Computer Methods in Applied Mechanics and Engineering, 2022, 397, 115135. | 3.4 | 6 |
| 691 | Integrated Development of a Topology-Optimized Compliant Mechanism for Precise Positioning. Actuators, 2022, 11, 179. | 1.2 | 1 |
| 692 | Topology optimization for polymeric stent. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 2 |
| 693 | Toward multiphysics multiscale concurrent topology optimization for lightweight structures with high heat conductivity and high stiffness using MATLAB. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 14 |
| 694 | A vectorized assembly-free FEM solver for image-based numerical homogenization. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2022, 44, . | 0.8 | 3 |
| 695 | A Simple Matlab Code for Material Design Optimization Using Reduced Order Models. Materials, 2022, 15, 4972. | 1.3 | 5 |
| 696 | Machine learning for topology optimization: Physics-based learning through an independent training strategy. Computer Methods in Applied Mechanics and Engineering, 2022, 398, 115116. | 3.4 | 21 |
| 697 | A reaction diffusion-based B-spline level set (RDBLS) method for structural topology optimization. Computer Methods in Applied Mechanics and Engineering, 2022, 398, 115252. | 3.4 | 9 |
| 698 | Variational autoencoder-based topological optimization of an anechoic coating: An efficient- and neural network-based design. Materials Today Communications, 2022, 32, 103901. | 0.9 | 2 |
| 699 | Solid isotropic material with thickness penalization – A 2.5D method for structural topology optimization. Computers and Structures, 2022, 270, 106857. | 2.4 | 6 |

| # | ARTICLE | IF | Citations |
|-----|--|-----|-----------|
| 700 | Acoustic hologram of the metasurface with phased arrays via optimality criteria. Mechanical Systems and Signal Processing, 2022, 180, 109420. | 4.4 | 4 |
| 701 | Optimized reinforcement distribution in reinforced concrete structures under plane stress state. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 1 |
| 702 | Improving mechanical ice protection systems with substrate shape optimization. Cold Regions Science and Technology, 2022, 202, 103641. | 1.6 | 4 |
| 703 | Improving the diversity of topology-optimized designs by swarm intelligence. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 1 |
| 704 | Deployment dynamics and topology optimization of a spinning inflatable structure. Acta Mechanica Sinica/Lixue Xuebao, 2022, 38, . | 1.5 | 2 |
| 705 | Efficient MATLAB implementation of NURBS-based IGA and material design using isogeometric topology optimization. Optimization and Engineering, 0, , . | 1.3 | 0 |
| 706 | Topology-optimized thermal metamaterials traversing full-parameter anisotropic space. Npj Computational Materials, 2022, 8, . | 3.5 | 19 |
| 707 | Topology optimization of scale-dependent non-local plates. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 7 |
| 708 | Reliability-based optimization of structural topologies using artificial neural networks. Probabilistic Engineering Mechanics, 2022, 70, 103356. | 1.3 | 6 |
| 709 | De-homogenization of optimal 2D topologies for multiple loading cases. Computer Methods in Applied Mechanics and Engineering, 2022, 399, 115426. | 3.4 | 9 |
| 710 | Innovative design of long-span steel–concrete composite bridge using multi-material topology optimization. Engineering Structures, 2022, 269, 114838. | 2.6 | 24 |
| 711 | Real-time topology optimization based on deep learning for moving morphable components. Automation in Construction, 2022, 142, 104492. | 4.8 | 8 |
| 712 | An approach for the concurrent homogenization-based microstructure type and topology optimization problem. Computers and Structures, 2022, 272, 106859. | 2.4 | 3 |
| 713 | Concurrent multiscale topology optimization: A hybrid approach. Vietnam Journal of Mechanics, 0, , . | 0.2 | 1 |
| 714 | Structural topology optimization with predetermined breaking points. Computer Methods in Applied Mechanics and Engineering, 2022, 400, 115610. | 3.4 | 4 |
| 715 | Problem-independent machine learning (PIML)-based topology optimizationâ€"A universal approach. Extreme Mechanics Letters, 2022, 56, 101887. | 2.0 | 20 |
| 716 | Discrete global optimization algorithms for the inverse design of silicon photonics devices. Photonics and Nanostructures - Fundamentals and Applications, 2022, 52, 101072. | 1.0 | 3 |
| 717 | Data-driven M-VCUT topology optimization method for heat conduction problem of cellular structure with multiple microstructure prototypes. International Journal of Heat and Mass Transfer, 2022, 198, 123421. | 2.5 | 8 |

| # | Article | IF | Citations |
|-----|---|-----|-----------|
| 718 | Level set-based topology optimization for thermal-fluid system based on the radial basis functions. Applied Mathematical Modelling, 2023, 113, 144-159. | 2.2 | 3 |
| 719 | A Simplistic Approach to Bone Healing Simulation. Critical Reviews in Biomedical Engineering, 2022, , . | 0.5 | 0 |
| 720 | Topology Optimization of a Folded Beam Piezoelectric Energy Harvester. IFAC-PapersOnLine, 2022, 55, 379-384. | 0.5 | 2 |
| 721 | Density-based topology optimization of thin plate structure with geometric nonlinearity using a three-dimensional corotational triangle element formulation. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 2 |
| 722 | A space-preserving data structure for isogeometric topology optimization in B-splines space. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 4 |
| 723 | Optimal design of functionally graded lattice structures using Hencky bar-grid model and topology optimization. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 1 |
| 724 | Simple strategy toward tailoring fracture properties of Abrittle architected materials. International Journal for Numerical Methods in Engineering, 2023, 124, 334-357. | 1.5 | 5 |
| 725 | Multi-material topology optimization for the PMSMs under the consideration of the MTPA control. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 5 |
| 726 | Stress-constrained topology optimization using approximate reanalysis with on-the-fly reduced order modeling. Advanced Modeling and Simulation in Engineering Sciences, 2022, 9, . | 0.7 | 0 |
| 727 | On the use of artificial neural networks in topology optimisation. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 46 |
| 728 | An open-source framework for large-scale transient topology optimization using PETSc. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 4 |
| 729 | Topology Optimization of Thermal Insulators considering Thermal–Structural Multi-Objective Function. Engineering Optimization, 2023, 55, 1861-1885. | 1.5 | 0 |
| 730 | Topology Optimization Based Material Design for 3D Domains Using MATLAB. Applied Sciences (Switzerland), 2022, 12, 10902. | 1.3 | 5 |
| 731 | On benchmarking and good scientific practise in topology optimization. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 17 |
| 732 | A stress-based criterion to identify and control intersections in 2D compliance minimization topology optimization. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 0 |
| 733 | A topology description functionâ€enhanced neural network for topology optimization. Computer-Aided Civil and Infrastructure Engineering, 2023, 38, 1020-1040. | 6.3 | 3 |
| 734 | A MATLAB code of node-based topology optimization in 3D arbitrary domain for additive manufacturing. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 1 |
| 735 | Variable-height stiffener design using topology optimization with anisotropic filter-based casting constraints. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 1 |

| # | Article | IF | Citations |
|-----|---|-----|-----------|
| 736 | Machine learning based lattice generation method derived from topology optimisation. Additive Manufacturing, 2022, 60, 103238. | 1.7 | 2 |
| 737 | Adjustable mechanical properties design of microstructure by using generative and adversarial network with gradient penalty. Mechanics of Advanced Materials and Structures, 2024, 31, 1059-1070. | 1.5 | 3 |
| 738 | Deep learning accelerated topology optimization with inherent control of image quality. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 1 |
| 739 | Optimum selection of reinforcement, assembly, and formwork system for digital fabrication technique in construction industry – A critical review. Structures, 2022, 46, 725-749. | 1.7 | 6 |
| 740 | On the design of mechanical heterogeneous specimens using multilevel topology optimization. Advances in Engineering Software, 2023, 175, 103314. | 1.8 | 4 |
| 741 | Multiscale topology optimization of biodegradable metal matrix composite structures for additive manufacturing. Applied Mathematical Modelling, 2023, 114, 799-822. | 2.2 | 5 |
| 742 | Growth of oriented orthotropic structures with reaction/diffusion. Structural and Multidisciplinary Optimization, 2022, 65, . | 1.7 | 5 |
| 743 | Data-driven design of graded composite lattice structures with multiple microstructure prototypes and materials. Composite Structures, 2023, 305, 116485. | 3.1 | 3 |
| 744 | A deep learning approach for inverse design of gradient mechanical metamaterials. International Journal of Mechanical Sciences, 2023, 240, 107920. | 3.6 | 23 |
| 745 | Cellular Automaton Mimicking Colliding Bodies for Topology Optimization. Materials, 2022, 15, 8057. | 1.3 | 4 |
| 746 | Parametric shell lattice with tailored mechanical properties. Additive Manufacturing, 2022, 60, 103258. | 1.7 | 2 |
| 748 | Review and prospects of metamaterials used to control elastic waves and vibrations. Frontiers in Physics, 0, 10 , . | 1.0 | 6 |
| 749 | A new non-gradient-based topology optimization algorithm with black–white density and manufacturability constraints. Structures, 2023, 47, 1900-1911. | 1.7 | 3 |
| 750 | Implicit lunar dust mitigation technology: Compliant mechanisms. Acta Astronautica, 2023, 203, 146-156. | 1.7 | 7 |
| 751 | A Physics-Informed Neural Network-based Topology Optimization (PINNTO) framework for structural optimization. Engineering Structures, 2023, 278, 115484. | 2.6 | 20 |
| 752 | Implementation of an elastic no-tension material model in a sequentially linear analysis framework. Finite Elements in Analysis and Design, 2023, 216, 103891. | 1.7 | 3 |
| 753 | Topology Optimization Design of an Active Deformable Mirror Based on Discrete Orthogonal Zernike Polynomials. Symmetry, 2022, 14, 2469. | 1.1 | 0 |
| 754 | Extreme Specific Stiffness Through Interactive Cellular Networks in Biâ€Level Microâ€Topology Architected Metamaterials. Advanced Engineering Materials, 2023, 25, . | 1.6 | 5 |

| # | Article | IF | Citations |
|-----|--|-------------|-----------|
| 755 | Multi-Head Self-Attention Generative Adversarial Networks for Multiphysics Topology Optimization. AIAA Journal, 2023, 61, 726-738. | 1.5 | 1 |
| 756 | An improved evolutionary structure optimization method for smooth topology design of structures. International Journal of Computational Methods, 0, , . | 0.8 | 0 |
| 757 | Topology optimization design of compliant amplification mechanisms with low parasitic displacement. Journal of Micromechanics and Microengineering, 2023, 33, 025001. | 1.5 | 1 |
| 758 | A 168-line MATLAB code for topology optimization with the adaptive bubble method (ABM). Structural and Multidisciplinary Optimization, 2023, 66, . | 1.7 | 5 |
| 759 | Deep energy method in topology optimization applications. Acta Mechanica, 2023, 234, 1365-1379. | 1.1 | 12 |
| 760 | Topology optimization of structures composed of more than two materials with different tensile and compressive properties. Composite Structures, 2023, 306, 116609. | 3.1 | 7 |
| 761 | A detailed introduction to density-based topology optimisation of fluid flow problems with implementation in MATLAB. Structural and Multidisciplinary Optimization, 2023, 66, . | 1.7 | 7 |
| 762 | A 172-line Matlab code for structural topology optimization in the body-fitted mesh. Structural and Multidisciplinary Optimization, 2023, 66, . | 1.7 | 6 |
| 763 | Inverse Design of Energyâ€Absorbing Metamaterials by Topology Optimization. Advanced Science, 2023, 10, . | 5.6 | 23 |
| 764 | Development of Deep Convolutional Neural Network for Structural Topology Optimization. AIAA Journal, 0, , 1-14. | 1.5 | 4 |
| 765 | Massively efficient filter for topology optimization based on the splitting of tensor product structure. Frontiers of Mechanical Engineering, 2022, 17, . | 2.5 | 1 |
| 766 | Tree Reconstruction Using Topology Optimisation. Remote Sensing, 2023, 15, 172. | 1.8 | 3 |
| 767 | Controlling interstory drift ratio profiles via topology optimization strategies. Frontiers of Structural and Civil Engineering, 0, , . | 1.2 | 0 |
| 768 | A Simple and Efficient Structural Topology Optimization Implementation Using Open-Source Software for All Steps of the Algorithm: Modeling, Sensitivity Analysis and Optimization. CMES - Computer Modeling in Engineering and Sciences, 2023, 136, 1371-1397. | 0.8 | 1 |
| 769 | An efficient topology optimization method based on adaptive reanalysis with projection reduction. Engineering With Computers, 2024, 40, 213-234. | 3. 5 | 0 |
| 770 | Implementation of Machine Learning-based Lattice Generation Strategy for Elliptic-cavity Lattice Cell., 2023,,. | | O |
| 771 | Characterisation and design of two-dimensional multi-morphology cellular structures for desired deformation. Journal of Computational Design and Engineering, 0, , . | 1.5 | 2 |
| 772 | Simple and efficient GPU accelerated topology optimisation: Codes and applications. Computer Methods in Applied Mechanics and Engineering, 2023, 410, 116043. | 3.4 | 7 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 773 | Influence of topology optimization parameters on the mechanical response of an additively manufactured test structure. Journal of the Mechanical Behavior of Biomedical Materials, 2023, 142, 105844. | 1.5 | 2 |
| 774 | 3D printing of continuous carbon fibre reinforced polymer composites with optimised structural topology and fibre orientation. Composite Structures, 2023, 313, 116914. | 3.1 | 17 |
| 775 | Thermal design of functionally graded cellular structures with multiple microstructure configurations through topology optimization. Composite Structures, 2023, 313, 116922. | 3.1 | 0 |
| 776 | Improving the manufacturability of highly materially restricted topology-optimized designs with Mixed Integer Linear Programming. Engineering Structures, 2023, 284, 115955. | 2.6 | 1 |
| 777 | Topology optimization for additive manufacturing with strength constraints considering anisotropy. Journal of Computational Design and Engineering, 2023, 10, 892-904. | 1.5 | 1 |
| 778 | Interactive Structural Topology Optimization with Subjective Scoring and Drawing Systems. CAD Computer Aided Design, 2023, 160, 103532. | 1.4 | 3 |
| 779 | Generative Design in Architecture: From Mathematical Optimization to Grammatical Customization. Management and Industrial Engineering, 2023, , 1-43. | 0.3 | 0 |
| 780 | Learning topology optimization process via convolutional longâ€shortâ€term memory autoencoderâ€decoder. International Journal for Numerical Methods in Engineering, 2023, 124, 2571-2588. | 1.5 | 1 |
| 781 | Using 3D Density-Gradient Vectors in Evolutionary Topology Optimization to Find the Build Direction for Additive Manufacturing. Journal of Manufacturing and Materials Processing, 2023, 7, 46. | 1.0 | 1 |
| 782 | Application of ABAQUS by Using Python in Concrete-Filled Steel Tube. Lecture Notes in Civil Engineering, 2023, , 419-426. | 0.3 | 0 |
| 783 | Inertial projected gradient method for large-scale topology optimization. Japan Journal of Industrial and Applied Mathematics, 2023, 40, 877-905. | 0.5 | 2 |
| 784 | Developing Mechanical Metamaterials Under an Adaptable Topology Optimization Design Framework. Acta Mechanica Solida Sinica, 2023, 36, 306-316. | 1.0 | 2 |
| 785 | Multidisciplinary Topology Optimization Using Generative Adversarial Networks for Physics-Based Design Enhancement. Journal of Mechanical Design, Transactions of the ASME, 2023, 145, . | 1.7 | 2 |
| 786 | Open-Source Codes of Topology Optimization: A Summary for Beginners to Start Their Research. CMES - Computer Modeling in Engineering and Sciences, 2023, 137, 1-34. | 0.8 | 3 |
| 787 | Human-Informed Topology Optimization: interactive application of feature size controls. Structural and Multidisciplinary Optimization, 2023, 66, . | 1.7 | 5 |
| 788 | A multi-material Proportional Topology Optimization approach for compliant mechanism problems. European Journal of Mechanics, A/Solids, 2023, 100, 104957. | 2.1 | 2 |
| 789 | Real-Time Structure Generation Based on Data-Driven Using Machine Learning. Processes, 2023, 11, 802. | 1.3 | 0 |
| 790 | Topology optimization for metal additive manufacturing: current trends, challenges, and future outlook. Virtual and Physical Prototyping, 2023, 18, . | 5.3 | 20 |

| # | Article | IF | CITATIONS |
|-----|---|------|-----------|
| 791 | Microstructure hull and design. , 2023, , 299-419. | | 0 |
| 792 | A FreeFEM code for topological derivative-based structural optimization. Structural and Multidisciplinary Optimization, 2023, 66, . | 1.7 | 0 |
| 793 | Smoothing inertial method for worst-case robust topology optimization under load uncertainty. Structural and Multidisciplinary Optimization, 2023, 66, . | 1.7 | 0 |
| 794 | A machine-learning framework for isogeometric topology optimization. Structural and Multidisciplinary Optimization, 2023, 66, . | 1.7 | 2 |
| 795 | Static and dynamic topology optimization: an innovative unifying approach. Structural and Multidisciplinary Optimization, 2023, 66, . | 1.7 | 0 |
| 796 | Robust reliability-based topology optimization for stress-constrained continuum structures using polynomial chaos expansion. Structural and Multidisciplinary Optimization, 2023, 66, . | 1.7 | 2 |
| 797 | Multiscale Design of Graded Stochastic Cellular Structures for the Heat Transfer Problem. Applied Sciences (Switzerland), 2023, 13, 4409. | 1.3 | 2 |
| 798 | Buckling of externally pressurised ellipsoidal domes with variable wall thicknesses. Ships and Offshore Structures, 0, , 1-10. | 0.9 | 0 |
| 799 | TOPress: a MATLAB implementation for topology optimization of structures subjected to design-dependent pressure loads. Structural and Multidisciplinary Optimization, 2023, 66, . | 1.7 | 3 |
| 800 | Minimum-thickness method for 2.5D topology optimization applied to structural design. Engineering Structures, 2023, 286, 116065. | 2.6 | 2 |
| 801 | Quantum Topology Optimization via Quantum Annealing. IEEE Transactions on Quantum Engineering, 2023, 4, 1-15. | 2.9 | 6 |
| 802 | Topology Optimization of fiber reinforced structures considering stress constraint and optimized penalization. Composite Structures, 2023, 316, 117006. | 3.1 | 3 |
| 803 | A unified material interpolation for topology optimization of multi-materials. Computers and Structures, 2023, 282, 107041. | 2.4 | 8 |
| 804 | A 3D structure mapping-based efficient topology optimization framework. Journal of Mechanical Design, Transactions of the ASME, 0, , 1-20. | 1.7 | 0 |
| 805 | On Non-Penalization SEMDOT Using Discrete Variable Sensitivities. Journal of Optimization Theory and Applications, 2023, 198, 644-677. | 0.8 | 5 |
| 806 | Computational analysis of prosthesis production via topology optimization. Computer Methods in Biomechanics and Biomedical Engineering, 2024, 27, 785-795. | 0.9 | 0 |
| 807 | Holistic computational design within additive manufacturing through topology optimization combined with multiphysics multi-scale materials and process modelling. Progress in Materials Science, 2023, 138, 101129. | 16.0 | 14 |
| 808 | Integrated optimization of 3D structural topology and 2D Halbach parameters for maglev planar motor. Materials and Design, 2023, 230, 111945. | 3.3 | 0 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 821 | Development Stages of Structurally Optimised Concrete Girders: Design Concepts, Material Strategies and Experimental Investigation. Lecture Notes in Civil Engineering, 2023, , 1403-1411. | 0.3 | 2 |
| 822 | Assessment of Influential Parameters in Topology Optimization of Thermo-Mechanically Loaded Concrete Structures. Lecture Notes in Civil Engineering, 2023, , 119-127. | 0.3 | 0 |
| 839 | Statics and Dynamics Simulation Analysis of the Industrial Robot Arm Structure Based on the Generative Design. , 2023, , . | | 0 |
| 851 | Comparison of Different Topology Optimization Algorithms to Optimize Messerschmitt-Bolkow-Blohm Beam. Smart Innovation, Systems and Technologies, 2023, , 295-305. | 0.5 | 0 |
| 878 | Overview on Machine Learning Assisted Topology Optimization Methodologies. Computational Methods in Engineering & the Sciences, 2023, , 373-394. | 0.3 | 0 |
| 882 | Research on the efficiency of combined convolutional neural network and traditional optimization methods., 2023,,. | | 0 |
| 891 | Topology Optimization. Springer Handbooks, 2023, , 287-302. | 0.3 | 0 |
| 903 | More Stiffness with Less Fiber: End-to-End Fiber Path Optimization for 3D-Printed Composites. , 2023, , . | | O |
| 913 | Full-Scale Isogeometric Topology Optimization of Porous Thin-Shell Structures. Mechanisms and Machine Science, 2024, , 105-119. | 0.3 | 0 |
| 918 | Comparison study of the causes and impacts of change order between the relative importance index (RII) method and fuzzy clustering means (FCM) method. AIP Conference Proceedings, 2023, , . | 0.3 | 0 |
| 920 | Topology Optimization of Piezoelectric Structures: Micro-Actuators and Energy Harvesters., 2023,,. | | 0 |
| 925 | STUDY OF HEAT TRANSFER PERFORMANCE OF DUAL HEAT SOURCE OSCILLATING HEAT PIPE BASED ON TOPOLOGY OPTIMIZIATION. , 2023, , . | | 0 |
| 936 | Interface-enriched topology optimization. , 2024, , 203-222. | | 0 |
| 940 | Sensitivity-Weighted Mesostructure Selection within a Multiscale Topology Optimization Framework. , 2024, , . | | 0 |
| 941 | A Comprehensive Review of Explicit Topology Optimization Based on Moving Morphable Components (MMC) Method. Archives of Computational Methods in Engineering, 0, , . | 6.0 | 0 |