

Ole Sigmund

List of Publications by Year in descending order

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337
papers

36,388
citations

5558

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180
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342
all docs

342
docs citations

342
times ranked

8716
citing authors

#	ARTICLE	IF	CITATIONS
1	De-homogenization using convolutional neural networks. Computer Methods in Applied Mechanics and Engineering, 2022, 388, 114197.	3.4	12
2	Topology optimization of damage-resistant structures with a predefined load-bearing capacity. International Journal for Numerical Methods in Engineering, 2022, 123, 1114-1145.	1.5	5
3	Synthesis of Frame Field-Aligned Multi-Laminar Structures. ACM Transactions on Graphics, 2022, 41, 1-20.	4.9	7
4	Topology optimization guided by a geometrical pattern library. Structural and Multidisciplinary Optimization, 2022, 65, 1.	1.7	7
5	Ultra-broadband edge-state pair for zigzag-interfaced valley Hall insulators. Science China: Physics, Mechanics and Astronomy, 2022, 65, 1.	2.0	12
6	Digital synthesis of free-form multimaterial structures for realization of arbitrary programmed mechanical responses. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2120563119.	3.3	17
7	Topology optimization of structures with infill-supported enclosed voids for additive manufacturing. Additive Manufacturing, 2022, 55, 102795.	1.7	3
8	Topology Optimization of Graded Truss Lattices Based on On-the-Fly Homogenization. Journal of Applied Mechanics, Transactions ASME, 2022, 89, .	1.1	12
9	Topology optimization and 3D printing of large deformation compliant mechanisms for straining biological tissues. Structural and Multidisciplinary Optimization, 2021, 63, 1351-1366.	1.7	19
10	On the competition for ultimately stiff and strong architected materials. Materials and Design, 2021, 198, 109356.	3.3	32
11	Topology optimization of ultra high resolution shell structures. Thin-Walled Structures, 2021, 160, 107349.	2.7	23
12	Ultra-coherent fundamental mode mechanical resonators designed using topology optimization. , 2021, , .		0
13	Inverse design in photonics by topology optimization: tutorial. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 496.	0.9	103
14	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
15	Design of metamaterial mechanisms using robust topology optimization and variable linking scheme. Structural and Multidisciplinary Optimization, 2021, 63, 1975-1988.	1.7	14
16	Internal contact modeling for finite strain topology optimization. Computational Mechanics, 2021, 67, 1099-1114.	2.2	14
17	Topology optimization of multi-scale structures: a review. Structural and Multidisciplinary Optimization, 2021, 63, 1455-1480.	1.7	206
18	Multi-scale topology optimization for stiffness and de-homogenization using implicit geometry modeling. Structural and Multidisciplinary Optimization, 2021, 63, 2919-2934.	1.7	18

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19	Topology optimization with linearized buckling criteria in 250 lines of Matlab. Structural and Multidisciplinary Optimization, 2021, 63, 3045-3066.	1.7	34
20	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
21	Compact 200 line MATLAB code for inverse design in photonics by topology optimization: tutorial: erratum. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 1822.	0.9	2
22	Revisiting the optimal thickness profile of cooling fins: A one-dimensional analytical study using optimality conditions. , 2021, , .		1
23	Topology optimization of microvascular composites for active-cooling applications using a geometrical reduced-order model. Structural and Multidisciplinary Optimization, 2021, 64, 563.	1.7	1
24	Design of composite structures with programmable elastic responses under finite deformations. Journal of the Mechanics and Physics of Solids, 2021, 151, 104356.	2.3	20
25	3D architected isotropic materials with tunable stiffness and buckling strength. Journal of the Mechanics and Physics of Solids, 2021, 152, 104415.	2.3	17
26	Complementary lecture notes for teaching the 99/88-line topology optimization codes. Structural and Multidisciplinary Optimization, 2021, 64, 3227-3231.	1.7	4
27	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
28	Plate microstructures with extreme stiffness for arbitrary multi-loadings. Computer Methods in Applied Mechanics and Engineering, 2021, 381, 113778.	3.4	8
29	Topology Optimization of Large-Scale 3D Morphing Wing Structures. Actuators, 2021, 10, 217.	1.2	13
30	Ultra-coherent nanomechanical resonators based on inverse design. Nature Communications, 2021, 12, 5766.	5.8	37
31	Reduced-order methods for dynamic problems in topology optimization: A comparative study. Computer Methods in Applied Mechanics and Engineering, 2021, 387, 114149.	3.4	32
32	Self-supporting structure design with feature-driven optimization approach for additive manufacturing. Computer Methods in Applied Mechanics and Engineering, 2021, 386, 114110.	3.4	19
33	Three-dimensional manufacturing tolerant topology optimization with hundreds of millions of local stress constraints. International Journal for Numerical Methods in Engineering, 2021, 122, 548-578.	1.5	42
34	A comprehensive review of educational articles on structural and multidisciplinary optimization. Structural and Multidisciplinary Optimization, 2021, 64, 2827-2880.	1.7	57
35	Experimental Realization of Topology-Optimized InP Photonic Cavities with Extreme Dielectric Confinement. , 2021, , .		1
36	Improving the efficiency of upconversion by light concentration using nanoparticle design. Journal Physics D: Applied Physics, 2020, 53, 073001.	1.3	9

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37	Nonlinear compressive stability of hyperelastic 2D lattices at finite volume fractions. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 137, 103851.	2.3	19
38	Quasiperiodic mechanical metamaterials with extreme isotropic stiffness. <i>Extreme Mechanics Letters</i> , 2020, 34, 100596.	2.0	56
39	A "pore-man" approach for high-resolution three-dimensional topology design for natural convection problems. <i>Advances in Engineering Software</i> , 2020, 140, 102736.	1.8	35
40	Additive manufacturing oriented topology optimization of structures with self-supported enclosed voids. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 372, 113385.	3.4	56
41	Efficient hybrid topology and shape optimization combining implicit and explicit design representations. <i>Structural and Multidisciplinary Optimization</i> , 2020, 62, 1061-1069.	1.7	12
42	Topology optimization of two fluid heat exchangers. <i>International Journal of Heat and Mass Transfer</i> , 2020, 163, 120543.	2.5	43
43	A new generation 99 line Matlab code for compliance topology optimization and its extension to 3D. <i>Structural and Multidisciplinary Optimization</i> , 2020, 62, 2211-2228.	1.7	114
44	Singularity aware de-homogenization for high-resolution topology optimized structures. <i>Structural and Multidisciplinary Optimization</i> , 2020, 62, 2279-2295.	1.7	25
45	Aerodynamic Shape Optimization of Aircraft Wings Using Panel Methods. <i>AIAA Journal</i> , 2020, 58, 3765-3776.	1.5	12
46	Inverse homogenization using isogeometric shape optimization. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 368, 113170.	3.4	11
47	Closing the gap towards super-long suspension bridges using computational morphogenesis. <i>Nature Communications</i> , 2020, 11, 2735.	5.8	49
48	Sparse basis pursuit for compliance minimization in the vanishing volume ratio limit. <i>ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , 2020, 100, e202000008.	0.9	3
49	Topology optimization of compliant mechanisms considering stress constraints, manufacturing uncertainty and geometric nonlinearity. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 365, 112972.	3.4	36
50	De-homogenization of optimal multi-scale 3D topologies. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 364, 112979.	3.4	67
51	Towards solving large-scale topology optimization problems with buckling constraints at the cost of linear analyses. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 363, 112911.	3.4	36
52	EML webinar overview: Topology Optimization " Status and Perspectives. <i>Extreme Mechanics Letters</i> , 2020, 39, 100855.	2.0	15
53	Numerical investigation of stiffness and buckling response of simple and optimized infill structures. <i>Structural and Multidisciplinary Optimization</i> , 2020, 61, 2629-2639.	1.7	20
54	Strongly enhanced upconversion in trivalent erbium ions by tailored gold nanostructures: Toward high-efficient silicon-based photovoltaics. <i>Solar Energy Materials and Solar Cells</i> , 2020, 208, 110406.	3.0	14

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55	Systematic design of high-Q prestressed micro membrane resonators. Computer Methods in Applied Mechanics and Engineering, 2020, 361, 112692.	3.4	13
56	Special issue for the 13th world congress on structural and multidisciplinary optimization – editorial note. Structural and Multidisciplinary Optimization, 2020, 61, 2225-2226.	1.7	2
57	Inverse design of nanoparticles for enhanced Raman scattering. Optics Express, 2020, 28, 4444.	1.7	26
58	Topology optimization of microchannel heat sinks using a two-layer model. International Journal of Heat and Mass Transfer, 2019, 143, 118462.	2.5	58
59	A density-based topology optimization methodology for thermal energy storage systems. Structural and Multidisciplinary Optimization, 2019, 60, 2189-2204.	1.7	13
60	Shape preserving design of geometrically nonlinear structures using topology optimization. Structural and Multidisciplinary Optimization, 2019, 59, 1033-1051.	1.7	20
61	Topology optimization and experimental verification of compact E-plane waveguide filters. Microwave and Optical Technology Letters, 2019, 61, 1208-1215.	0.9	4
62	Topology optimization of compliant mechanisms with stress constraints and manufacturing error robustness. Computer Methods in Applied Mechanics and Engineering, 2019, 354, 397-421.	3.4	53
63	Topological Insulators by Topology Optimization. Physical Review Letters, 2019, 122, 234502.	2.9	78
64	Designing photonic topological insulators with quantum-spin-Hall edge states using topology optimization. Nanophotonics, 2019, 8, 1363-1369.	2.9	48
65	Simple optimal lattice structures for arbitrary loadings. Extreme Mechanics Letters, 2019, 29, 100447.	2.0	25
66	Simple single-scale microstructures based on optimal rank-3 laminates. Structural and Multidisciplinary Optimization, 2019, 59, 1021-1031.	1.7	22
67	Homogenization-based stiffness optimization and projection of 2D coated structures with orthotropic infill. Computer Methods in Applied Mechanics and Engineering, 2019, 349, 722-742.	3.4	112
68	Revisiting topology optimization with buckling constraints. Structural and Multidisciplinary Optimization, 2019, 59, 1401-1415.	1.7	79
69	Design of segmented thermoelectric Peltier coolers by topology optimization. Applied Energy, 2019, 239, 1003-1013.	5.1	36
70	A “poor man’s” approach to topology optimization of natural convection problems. Structural and Multidisciplinary Optimization, 2019, 59, 1105-1124.	1.7	46
71	Systematic Design of Photonic Crystal Cavities with Ultra-Low Modal Volume Considering Different Fabrication Resolutions. , 2019, , .		0
72	A non-linear material interpolation for design of metallic nano-particles using topology optimization. Computer Methods in Applied Mechanics and Engineering, 2019, 343, 23-39.	3.4	42

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73	Design of segmented off-diagonal thermoelectric generators using topology optimization. Applied Energy, 2019, 236, 950-960.	5.1	25
74	Stress-constrained topology optimization considering uniform manufacturing uncertainties. Computer Methods in Applied Mechanics and Engineering, 2019, 344, 512-537.	3.4	96
75	Acoustic and photonic topological insulators by topology optimization. , 2019, , .		2
76	Photonic cavity design by topology optimization. , 2019, , .		1
77	On the non-optimality of tree structures for heat conduction. International Journal of Heat and Mass Transfer, 2018, 122, 660-680.	2.5	79
78	Optimal truss and frame design from projected homogenization-based topology optimization. Structural and Multidisciplinary Optimization, 2018, 57, 1461-1474.	1.7	32
79	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
80	A density-based topology optimization methodology for thermoelectric energy conversion problems. Structural and Multidisciplinary Optimization, 2018, 57, 1427-1442.	1.7	20
81	Design of passive coolers for light-emitting diode lamps using topology optimisation. International Journal of Heat and Mass Transfer, 2018, 122, 138-149.	2.5	77
82	Revisiting density-based topology optimization for fluid-structure-interaction problems. Structural and Multidisciplinary Optimization, 2018, 58, 969-995.	1.7	42
83	Density based topology optimization of turbulent flow heat transfer systems. Structural and Multidisciplinary Optimization, 2018, 57, 1905-1918.	1.7	116
84	Topology optimization of a pseudo 3D thermofluid heat sink model. International Journal of Heat and Mass Transfer, 2018, 121, 1073-1088.	2.5	107
85	Frequency response as a surrogate eigenvalue problem in topology optimization. International Journal for Numerical Methods in Engineering, 2018, 113, 1214-1229.	1.5	28
86	Homogenization-based topology optimization for high-resolution manufacturable microstructures. International Journal for Numerical Methods in Engineering, 2018, 113, 1148-1163.	1.5	224
87	Infill Optimization for Additive Manufacturing – Approaching Bone-Like Porous Structures. IEEE Transactions on Visualization and Computer Graphics, 2018, 24, 1127-1140.	2.9	326
88	A “poor man’s” approach to topology optimization of cooling channels based on a Darcy flow model. International Journal of Heat and Mass Transfer, 2018, 116, 1108-1123.	2.5	89
89	Optimal design of robust piezoelectric unimorph microgrippers. Applied Mathematical Modelling, 2018, 55, 1-12.	2.2	24
90	Optimal design of robust piezoelectric microgrippers undergoing large displacements. Structural and Multidisciplinary Optimization, 2018, 57, 71-82.	1.7	35

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91	Topology optimization of turbulent flows. Computer Methods in Applied Mechanics and Engineering, 2018, 331, 363-393.	3.4	138
92	Which Computational Methods Are Good for Analyzing Large Photonic Crystal Membrane Cavities?. , 2018, , .		0
93	Maximizing the quality factor to mode volume ratio for ultra-small photonic crystal cavities. Applied Physics Letters, 2018, 113, .	1.5	67
94	Topology Optimization of Segmented Thermoelectric Generators. Journal of Electronic Materials, 2018, 47, 6959-6971.	1.0	4
95	Improving the efficiency of solar cells by upconverting sunlight using field enhancement from optimized nano structures. Optical Materials, 2018, 83, 279-289.	1.7	21
96	Dose regularization via filtering and projection: An open-source code for optimization-based proximity-effect-correction for nanoscale lithography. Microelectronic Engineering, 2018, 199, 52-57.	1.1	10
97	Benchmarking five numerical simulation techniques for computing resonance wavelengths and quality factors in photonic crystal membrane line defect cavities. Optics Express, 2018, 26, 11366.	1.7	16
98	Investment casting and experimental testing of heat sinks designed by topology optimization. International Journal of Heat and Mass Transfer, 2018, 127, 396-412.	2.5	59
99	Shape morphing and topology optimization of fluid channels by explicit boundary tracking. International Journal for Numerical Methods in Fluids, 2018, 88, 296-313.	0.9	27
100	Buckling strength topology optimization of 2D periodic materials based on linearized bifurcation analysis. Computer Methods in Applied Mechanics and Engineering, 2018, 339, 115-136.	3.4	88
101	Field-enhancing photonic devices utilizing waveguide coupling and plasmonics - a selection rule for optimization-based design. Optics Express, 2018, 26, A788.	1.7	4
102	Experimental validation of additively manufactured optimized shapes for passive cooling. Applied Energy, 2018, 226, 330-339.	5.1	64
103	Homogenization-based topology optimization for high-resolution manufacturable microstructures. , 2018, 113, 1148.		1
104	Structural topology optimization of bridge girders in cable supported bridges. , 2018, , .		1
105	Benchmarking state-of-the-art numerical simulation techniques for analyzing large photonic crystal membrane line defect cavities. , 2018, , .		0
106	Topology optimization for optical microlithography with partially coherent illumination. International Journal for Numerical Methods in Engineering, 2017, 109, 631-647.	1.5	9
107	Combined shape and topology optimization for minimization of maximal von Mises stress. Structural and Multidisciplinary Optimization, 2017, 55, 1541-1557.	1.7	74
108	Reproducing the hierarchy of disorder for Morpho-inspired, broad-angle color reflection. Scientific Reports, 2017, 7, 46023.	1.6	39

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109	Optimal design of a microgripper-type actuator based on AlN/Si heterogeneous bimorph. Proceedings of SPIE, 2017, , .	0.8	1
110	Topology optimization of 3D shell structures with porous infill. Acta Mechanica Sinica/Lixue Xuebao, 2017, 33, 778-791.	1.5	57
111	On fully stressed design and p-norm measures in structural optimization. Structural and Multidisciplinary Optimization, 2017, 56, 731-736.	1.7	31
112	A short numerical study on the optimization methods influence on topology optimization. Structural and Multidisciplinary Optimization, 2017, 56, 1603-1612.	1.7	7
113	Giga-voxel computational morphogenesis for structural design. Nature, 2017, 550, 84-86.	13.7	463
114	Topology optimized gold nanostrips for enhanced near-infrared photon upconversion. Applied Physics Letters, 2017, 111, .	1.5	13
115	Minimum compliance topology optimization of shellâ€infill composites for additive manufacturing. Computer Methods in Applied Mechanics and Engineering, 2017, 326, 358-375.	3.4	149
116	Comparison of five computational methods for computing Q factors in photonic crystal membrane cavities. , 2017, , .		0
117	Topology optimization of nanoparticles for localized electromagnetic field enhancement. , 2017, , .		0
118	Topology optimization for reduction of thermo-elastic dissipation in MEMS resonators. , 2017, , .		8
119	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
120	Benchmarking five computational methods for analyzing large photonic crystal membrane cavities. , 2017, , .		1
121	Optimization of photonic crystal cavities. , 2017, , .		3
122	Comparison of five numerical methods for computing quality factors and resonance wavelengths in photonic crystal membrane cavities. , 2017, , .		0
123	Topology optimization for simplified structural fire safety. Engineering Structures, 2016, 124, 333-343.	2.6	11
124	Experimental validation of systematically designed acoustic hyperbolic meta material slab exhibiting negative refraction. Applied Physics Letters, 2016, 109, .	1.5	29
125	A design approach for integrating thermoelectric devices using topology optimization. Applied Energy, 2016, 176, 49-64.	5.1	57
126	Inverse design engineering of all-silicon polarization beam splitters. Proceedings of SPIE, 2016, , .	0.8	10

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127	Industrial application of topology optimization for combined conductive and convective heat transfer problems. Structural and Multidisciplinary Optimization, 2016, 54, 1045-1060.	1.7	83
128	Improving topology optimization intuition through games. Structural and Multidisciplinary Optimization, 2016, 54, 775-781.	1.7	4
129	Exploiting Additive Manufacturing Infill in Topology Optimization for Improved Buckling Load. Engineering, 2016, 2, 250-257.	3.2	176
130	Topology optimized mode multiplexing in silicon-on-insulator photonic wire waveguides. Optics Express, 2016, 24, 16866.	1.7	181
131	Topology optimized design of a transverse electric higher order mode converter. , 2016, , .		1
132	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
133	Topology optimization of two-dimensional elastic wave barriers. Journal of Sound and Vibration, 2016, 376, 95-111.	2.1	33
134	Length scale and manufacturability in density-based topology optimization. Archive of Applied Mechanics, 2016, 86, 189-218.	1.2	203
135	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
136	Designing meta material slabs exhibiting negative refraction using topology optimization. Structural and Multidisciplinary Optimization, 2016, 54, 469-482.	1.7	47
137	Topology optimization of unsteady flow problems using the lattice Boltzmann method. Journal of Computational Physics, 2016, 307, 291-307.	1.9	66
138	On nanostructured silicon success. Nature Photonics, 2016, 10, 142-143.	15.6	8
139	Topology optimization of piezo modal transducers with null-polarity phases. Structural and Multidisciplinary Optimization, 2016, 53, 193-203.	1.7	15
140	On the (non-)optimality of Michell structures. Structural and Multidisciplinary Optimization, 2016, 54, 361-373.	1.7	119
141	Large scale three-dimensional topology optimisation of heat sinks cooled by natural convection. , 2016, 100, 876-876.		1
142	Topology-optimized mode converter in a silicon-on-insulator photonic wire waveguide. , 2016, , .		3
143	Experimental validation of a topology optimized acoustic cavity. Journal of the Acoustical Society of America, 2015, 138, 3470-3474.	0.5	14
144	Topology Optimized Architectures with Programmable Poisson's Ratio over Large Deformations. Advanced Materials, 2015, 27, 5523-5527.	11.1	380

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145	Topology-optimized silicon photonic wire mode (de)multiplexer. Proceedings of SPIE, 2015, , .	0.8	1
146	Minimum length scale in topology optimization by geometric constraints. Computer Methods in Applied Mechanics and Engineering, 2015, 293, 266-282.	3.4	275
147	Topology optimized design for silicon-on-insulator mode converter. , 2015, , .		1
148	Topology optimization of coated structures and material interface problems. Computer Methods in Applied Mechanics and Engineering, 2015, 290, 524-541.	3.4	142
149	Stress-constrained topology optimization for compliant mechanism design. Structural and Multidisciplinary Optimization, 2015, 52, 929-943.	1.7	97
150	Creating geometrically robust designs for highly sensitive problems using topology optimization. Structural and Multidisciplinary Optimization, 2015, 52, 737-754.	1.7	62
151	Designing visual appearance using a structured surface. Optica, 2015, 2, 239.	4.8	8
152	3D interactive topology optimization on hand-held devices. Structural and Multidisciplinary Optimization, 2015, 51, 1385-1391.	1.7	12
153	Combined shape and topology optimization of 3D structures. Computers and Graphics, 2015, 46, 25-35.	1.4	73
154	Topology Optimized Architectures with Programmable Poisson's Ratio over Large Deformations. , 2015, 27, 5523.		1
155	Flat-top Drop Filter based on a Single Topology Optimized Photonic Crystal Cavity. , 2015, , .		0
156	Inverse design of nanostructured surfaces for color effects. Journal of the Optical Society of America B: Optical Physics, 2014, 31, 164.	0.9	41
157	Topology optimization for optical projection lithography with manufacturing uncertainties. Applied Optics, 2014, 53, 2720.	0.9	34
158	Topology optimized mode conversion in a photonic crystal waveguide fabricated in silicon-on-insulator material. Optics Express, 2014, 22, 8525.	1.7	124
159	Topology optimisation for natural convection problems. International Journal for Numerical Methods in Fluids, 2014, 76, 699-721.	0.9	149
160	On the realization of the bulk modulus bounds for two-phase viscoelastic composites. Journal of the Mechanics and Physics of Solids, 2014, 63, 228-241.	2.3	48
161	Design of manufacturable 3D extremal elastic microstructure. Mechanics of Materials, 2014, 69, 1-10.	1.7	258
162	Design of structurally colored surfaces based on scalar diffraction theory. Journal of the Optical Society of America B: Optical Physics, 2014, 31, 207.	0.9	13

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163	Topology optimization using an explicit interface representation. Structural and Multidisciplinary Optimization, 2014, 49, 387-399.	1.7	67
164	Topology optimization of fail-safe structures using a simplified local damage model. Structural and Multidisciplinary Optimization, 2014, 49, 657-666.	1.7	95
165	Topology optimization with flexible void area. Structural and Multidisciplinary Optimization, 2014, 50, 927-943.	1.7	28
166	Interpolation scheme for fictitious domain techniques and topology optimization of finite strain elastic problems. Computer Methods in Applied Mechanics and Engineering, 2014, 276, 453-472.	3.4	171
167	Design of materials with prescribed nonlinear properties. Journal of the Mechanics and Physics of Solids, 2014, 69, 156-174.	2.3	143
168	Time domain topology optimization of 3D nanophotonic devices. Photonics and Nanostructures - Fundamentals and Applications, 2014, 12, 23-33.	1.0	42
169	Topology-optimized broadband surface relief transmission grating. Proceedings of SPIE, 2014, , .	0.8	1
170	Robust topology optimization accounting for geometric imperfections. , 2014, , 4965-4972.		0
171	Shape optimization of the stokes flow problem based on isogeometric analysis. Structural and Multidisciplinary Optimization, 2013, 48, 965-977.	1.7	30
172	On the similarities between micro/nano lithography and topology optimization projection methods. Structural and Multidisciplinary Optimization, 2013, 48, 717-730.	1.7	24
173	Robust topology optimization accounting for misplacement of material. Structural and Multidisciplinary Optimization, 2013, 47, 317-333.	1.7	61
174	A Review of the Scattering-Parameter Extraction Method with Clarification of Ambiguity Issues in Relation to Metamaterial Homogenization. IEEE Antennas and Propagation Magazine, 2013, 55, 91-106.	1.2	133
175	Topology optimization approaches. Structural and Multidisciplinary Optimization, 2013, 48, 1031-1055.	1.7	1,851
176	Topology optimization of fluid-structure-interaction problems in poroelasticity. Computer Methods in Applied Mechanics and Engineering, 2013, 258, 55-62.	3.4	51
177	Experimental Validation of Topology Optimization for RF MEMS Capacitive Switch Design. Journal of Microelectromechanical Systems, 2013, 22, 1296-1309.	1.7	27
178	Topology optimized mode conversion in a photonic crystal waveguide. , 2013, , .		2
179	Interactive topology optimization on hand-held devices. Structural and Multidisciplinary Optimization, 2013, 47, 1-6.	1.7	41
180	Reinforcement layout design for concrete structures based on continuum damage and truss topology optimization. Structural and Multidisciplinary Optimization, 2013, 47, 157-174.	1.7	93

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181	Topology Optimization of Stressed Capacitive RF MEMS Switches. Journal of Microelectromechanical Systems, 2013, 22, 206-215.	1.7	36
182	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
183	Topology Optimized Cloak for Airborne Sound. Journal of Vibration and Acoustics, Transactions of the ASME, 2013, 135, .	1.0	39
184	Optimization of extraordinary optical absorption in plasmonic and dielectric structures. Journal of the Optical Society of America B: Optical Physics, 2013, 30, 1154.	0.9	24
185	Topology optimized RF MEMS switches. , 2013, , .		0
186	Wavelength Selective 3D Topology Optimized Photonic Crystal Devices. , 2013, , .		4
187	Robust topology design of periodic grating surfaces. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 2935.	0.9	12
188	Systematic design of loss-engineered slow-light waveguides. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2012, 29, 2657.	0.8	20
189	Towards all-dielectric, polarization-independent optical cloaks. Applied Physics Letters, 2012, 100, 101106.	1.5	62
190	Multiscale modeling and topology optimization of poroelastic actuators. Smart Materials and Structures, 2012, 21, 065005.	1.8	16
191	Topology optimization considering material and geometric uncertainties using stochastic collocation methods. Structural and Multidisciplinary Optimization, 2012, 46, 597-612.	1.7	102
192	Sensitivity filtering from a continuum mechanics perspective. Structural and Multidisciplinary Optimization, 2012, 46, 471-475.	1.7	63
193	Efficient reanalysis techniques for robust topology optimization. Computer Methods in Applied Mechanics and Engineering, 2012, 245-246, 217-231.	3.4	50
194	High-performance slow light photonic crystal waveguides with topology optimized or circular-hole based material layouts. Photonics and Nanostructures - Fundamentals and Applications, 2012, 10, 378-388.	1.0	37
195	INVERSE DESIGN OF DIELECTRIC MATERIALS BY TOPOLOGY OPTIMIZATION. Progress in Electromagnetics Research, 2012, 127, 93-120.	1.6	15
196	Plasmonic versus dielectric enhancement in thin-film solar cells. Applied Physics Letters, 2012, 100, 211914.	1.5	25
197	Fundamental Limitations to Gain Enhancement in Periodic Media and Waveguides. Physical Review Letters, 2012, 108, 183903.	2.9	45
198	Topology optimization with geometric uncertainties by perturbation techniques. International Journal for Numerical Methods in Engineering, 2012, 90, 1321-1336.	1.5	110

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199	Design of robust and efficient photonic switches using topology optimization. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2012, 10, 153-165.	1.0	52
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