

Tsuyoshi Nomura

List of Publications by Year in descending order

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126
papers

2,415
citations

257357

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47
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127
all docs

127
docs citations

127
times ranked

1854
citing authors

#	ARTICLE	IF	CITATIONS
1	Polarization independent visible color filter comprising an aluminum film with surface-plasmon enhanced transmission through a subwavelength array of holes. Applied Physics Letters, 2011, 98, .	1.5	208
2	Heaviside projection based topology optimization by a PDE-filtered scalar function. Structural and Multidisciplinary Optimization, 2011, 44, 19-24.	1.7	190
3	Magnetic Metamaterial Superlens for Increased Range Wireless Power Transfer. Scientific Reports, 2014, 4, 3642.	1.6	138
4	Topology optimization for fluid-thermal interaction problems under constant input power. Structural and Multidisciplinary Optimization, 2013, 47, 571-581.	1.7	132
5	General topology optimization method with continuous and discrete orientation design using isoparametric projection. International Journal for Numerical Methods in Engineering, 2015, 101, 571-605.	1.5	100
6	Heat flux cloaking, focusing, and reversal in ultra-thin composites considering conduction-convection effects. Applied Physics Letters, 2013, 103, .	1.5	88
7	Topology optimization of grating couplers for the efficient excitation of surface plasmons. Journal of the Optical Society of America B: Optical Physics, 2010, 27, 1828.	0.9	86
8	Structural topology optimization for the design of broadband dielectric resonator antennas using the finite difference time domain technique. International Journal for Numerical Methods in Engineering, 2007, 71, 1261-1296.	1.5	81
9	Topology optimization for continuous and discrete orientation design of functionally graded fiber-reinforced composite structures. Composite Structures, 2018, 201, 217-233.	3.1	75
10	A level set-based topology optimization method targeting metallic waveguide design problems. International Journal for Numerical Methods in Engineering, 2011, 87, 844-868.	1.5	64
11	Topology Optimization of the Stator for Minimizing Cogging Torque of IPM Motors. IEEE Transactions on Magnetics, 2011, 47, 3024-3027.	1.2	63
12	Thermal-composite design optimization for heat flux shielding, focusing, and reversal. Structural and Multidisciplinary Optimization, 2014, 49, 59-68.	1.7	62
13	Multi-component topology and material orientation design of composite structures (MTO-C). Computer Methods in Applied Mechanics and Engineering, 2018, 342, 438-457.	3.4	60
14	Ultrasparse Acoustic Absorbers Enabling Fluid Flow and Visible-Light Controls. Physical Review Applied, 2019, 11, .	1.5	57
15	Design of optical circuit devices based on topology optimization. IEEE Photonics Technology Letters, 2006, 18, 850-852.	1.3	50
16	Topology optimization of functionally graded anisotropic composite structures using homogenization design method. Computer Methods in Applied Mechanics and Engineering, 2020, 369, 113220.	3.4	48
17	Inverse design of structure and fiber orientation by means of topology optimization with tensor field variables. Composites Part B: Engineering, 2019, 176, 107187.	5.9	47
18	Quasi-Static Magnetic Field Shielding Using Longitudinal Mu-Near-Zero Metamaterials. Scientific Reports, 2015, 5, 12764.	1.6	43

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19	Multiphysics Simulation. Simulation Foundations, Methods and Applications, 2014, , .	0.8	40
20	Thermal Metamaterials for Heat Flow Control in Electronics. Journal of Electronic Packaging, Transactions of the ASME, 2018, 140, .	1.2	39
21	Simultaneous Design Optimization of Permanent Magnet, Coils, and Ferromagnetic Material in Actuators. IEEE Transactions on Magnetics, 2011, 47, 4712-4716.	1.2	36
22	Cross-section optimization of topologically-optimized variable-axial anisotropic composite structures. Composite Structures, 2019, 225, 111150.	3.1	35
23	Design of Anisotropic Thermal Conductivity in Multilayer Printed Circuit Boards. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2015, 5, 1763-1774.	1.4	33
24	Topology optimization for the design of periodic microstructures composed of electromagnetic materials. Finite Elements in Analysis and Design, 2009, 45, 210-226.	1.7	29
25	Orthotropic material orientation optimization method in composite laminates. Structural and Multidisciplinary Optimization, 2018, 57, 815-828.	1.7	26
26	A consistent grayscale-free topology optimization method using the level-set method and zero-level boundary tracking mesh. International Journal for Numerical Methods in Engineering, 2015, 101, 744-773.	1.5	24
27	Topology optimization of Halbach magnet arrays using isoparametric projection. Journal of Magnetism and Magnetic Materials, 2017, 432, 140-153.	1.0	24
28	Fano-like Acoustic Resonance for Subwavelength Directional Sensing: 0°-360 Degree Measurement. Advanced Science, 2020, 7, 1903101.	5.6	24
29	A level set based topology optimization method using the discretized signed distance function as the design variables. Structural and Multidisciplinary Optimization, 2010, 41, 685-698.	1.7	23
30	Collection of low-grade waste heat for enhanced energy harvesting. AIP Advances, 2016, 6, .	0.6	23
31	Multicomponent Topology Optimization for Additive Manufacturing With Build Volume and Cavity Free Constraints. Journal of Computing and Information Science in Engineering, 2019, 19, .	1.7	23
32	Asymmetric loss-induced perfect sound absorption in duct silencers. Applied Physics Letters, 2020, 116, .	1.5	23
33	Inverse design of microchannel fluid flow networks using Turing pattern dehomogenization. Structural and Multidisciplinary Optimization, 2020, 62, 2203-2210.	1.7	23
34	Damped resonance for broadband acoustic absorption in one-port and two-port systems. Scientific Reports, 2019, 9, 13077.	1.6	22
35	Rotor pole design of IPM motors for a sinusoidal air-gap flux density distribution. Structural and Multidisciplinary Optimization, 2012, 46, 445-455.	1.7	20
36	Inverse design of microreactor flow fields through anisotropic porous media optimization and dehomogenization. Chemical Engineering Journal, 2022, 435, 134587.	6.6	19

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37	Topology optimization for design of segmented permanent magnet arrays with ferromagnetic materials. Journal of Magnetism and Magnetic Materials, 2018, 449, 571-581.	1.0	18
38	Inverse design of three-dimensional fiber reinforced composites with spatially-varying fiber size and orientation using multiscale topology optimization. Composite Structures, 2022, 279, 114768.	3.1	18
39	W-Band Steerable Composite Right/Left-Handed Leaky Wave Antenna for Automotive Applications. IEICE Transactions on Electronics, 2006, E89-C, 1337-1344.	0.3	16
40	Level set-based topology optimization targeting dielectric resonator-based composite right-handed and left-handed transmission lines. International Journal for Numerical Methods in Engineering, 2012, 89, 1272-1295.	1.5	14
41	Heat flow control in thermo-magnetic convective systems using engineered magnetic fields. Applied Physics Letters, 2012, 101, 123507.	1.5	13
42	Topology optimization by a time-dependent diffusion equation. International Journal for Numerical Methods in Engineering, 2013, 93, 795-817.	1.5	13
43	Directional Acoustic Superscattering by Coupled Resonators. Physical Review Applied, 2019, 12, .	1.5	13
44	Design of spatially-varying orthotropic infill structures using multiscale topology optimization and explicit de-homogenization. Additive Manufacturing, 2021, 40, 101920.	1.7	13
45	A Time-Domain Adjoint Variable Method for Materials With Dispersive Constitutive Parameters. IEEE Transactions on Microwave Theory and Techniques, 2012, 60, 2959-2971.	2.9	12
46	Anisotropic Multicomponent Topology Optimization for Additive Manufacturing With Build Orientation Design and Stress-Constrained Interfaces. Journal of Computing and Information Science in Engineering, 2021, 21, .	1.7	12
47	Electronically Scanned Left-Handed Leaky Wave Antenna for Millimeter-Wave Automotive Applications. , 0, , .		10
48	Topology optimization for cross-section designs of electromagnetic waveguides targeting guiding characteristics. Finite Elements in Analysis and Design, 2009, 45, 944-957.	1.7	10
49	Transmission phase control by stacked metal-dielectric hole array with two-dimensional geometric design. Optics Express, 2012, 20, 16092.	1.7	9
50	Polarization Filters for Visible Light Consisting of Subwavelength Slits in an Aluminum Film. Journal of Lightwave Technology, 2012, 30, 3463-3467.	2.7	9
51	Compliant mechanism design based on the level set and arbitrary Lagrangian Eulerian methods. Structural and Multidisciplinary Optimization, 2012, 46, 343-354.	1.7	9
52	Thermal Performance Optimization in Electric Vehicle Power Trains by Locally Orthotropic Surface Layer Design. Journal of Mechanical Design, Transactions of the ASME, 2018, 140, .	1.7	9
53	Asymptotic homogenization of magnetic composite for controllable permanent magnet. Composites Part B: Engineering, 2019, 161, 128-140.	5.9	8
54	Topology Optimization of Manifold Microchannel Heat Sinks. , 2020, , .		8

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55	Metamaterials for automotive applications. , 2007, , .		7
56	Wavefront control by stacked metal-dielectric hole array with variable hole shapes. Optics Express, 2013, 21, 6153.	1.7	7
57	Time domain adjoint sensitivity analysis of electromagnetic problems with nonlinear media. Optics Express, 2014, 22, 10831.	1.7	7
58	RGB color filter comprising aluminum film with surface plasmon enhanced transmission through sub-wavelength hole-arrays. , 2009, , .		6
59	Multi-Component Topology Optimization for Powder Bed Additive Manufacturing (MTO-A). , 2018, , .		6
60	Topology optimization of magnetic composite microstructures for electropermanent magnet. Journal of Magnetism and Magnetic Materials, 2020, 503, 166596.	1.0	6
61	Application of Topology Optimization to H-Plane Waveguide Component. IEICE Transactions on Electronics, 2007, E90-C, 282-287.	0.3	6
62	Measurement of low Reynolds number flow emanating from a Turing pattern microchannel array using a modified Bernoulli equation technique. Experimental Thermal and Fluid Science, 2022, 139, 110722.	1.5	6
63	Steerable Composite Right/Left-Handed Leaky Wave Antenna for Automotive Radar Applications. , 2006, , .		5
64	Adjoint variable method for two-dimensional plasmonic structures. Optics Letters, 2012, 37, 3453.	1.7	5
65	Color Filter Based on Surface Plasmon Resonance Utilizing Sub-Micron Periodic Hole Array in Aluminum Thin Film. IEICE Transactions on Electronics, 2012, E95-C, 251-254.	0.3	5
66	Topology optimization of time-transient heat conduction for thermo-optic silicon modulators. International Journal of Heat and Mass Transfer, 2020, 157, 119862.	2.5	5
67	Large-Scale Three-Dimensional Anisotropic Topology Optimization of Variable-Axial Lightweight Composite Structures. Journal of Mechanical Design, Transactions of the ASME, 2022, 144, .	1.7	5
68	Topology Optimization of Multiband Dielectric Resonator Antennas Using Finite-Difference Time-Domain Method. , 2007, , .		4
69	Planar inductor with quasi-distributed gap core and busbar based planar windings. , 2013, , .		4
70	Fabrication and Evaluation of a Magnetically Coupled EMI Filter Designed With Topology Optimization. IEEE Transactions on Power Electronics, 2021, 36, 12620-12630.	5.4	4
71	Geometric Loss Reduction in Tight Bent Waveguides for Silicon Photonics. , 2018, , .		4
72	A marker-and-cell method for large-scale flow-based topology optimization on GPU. Structural and Multidisciplinary Optimization, 2022, 65, 1.	1.7	4

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73	A study on miniaturization of antenna loaded with magnetic materials by using topology optimization. , 2007, , .		3
74	Design Optimization of Magnetic Fluid Cooling System. , 2012, , .		3
75	Topology optimization using multistep mapping from 2D photomask to 3D structure for designing reinforcing rib. Sensors and Actuators A: Physical, 2014, 215, 130-135.	2.0	3
76	A level set-based topology optimization incorporating arbitrary Lagrangian Eulerian method for wavelength filter using extraordinary optical transmission. Structural and Multidisciplinary Optimization, 2014, 50, 465-474.	1.7	2
77	Boundary shape design by using PDE filtered design variables. Structural and Multidisciplinary Optimization, 2017, 56, 619-629.	1.7	2
78	Anisotropic Multicomponent Topology Optimization for Additive Manufacturing With Build Orientation Design and Stress-Constrained Interfaces. , 2019, , .		2
79	3103 Flow channel design in heat exchanger for maximum heat transfer by topology optimization. The Proceedings of Design & Systems Conference, 2010, 2010.20, _3103-1_-_3103-4_.	0.0	2
80	Structural Optimization of Metallic Infrared Filters Based on Extraordinary Optical Transmission. Transactions of the Materials Research Society of Japan, 2013, 38, 167-170.	0.2	2
81	Topology optimization with wall thickness and piecewise developability constraints for foldable shape-changing structures. Structural and Multidisciplinary Optimization, 2022, 65, 1.	1.7	2
82	Structural Design Using Cellular Automata. A Consideration on Derivation of Local Rule.. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 1998, 64, 1717-1724.	0.2	1
83	Multi-disciplinary Multi-objective Topology Optimization of Electromagnetics and Structural Mechanics (For Case of Optimal Dielectric Resonator Antenna Designs). Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2007, 73, 1111-1119.	0.2	1
84	Optical Filters Based on Nano-Sized Hole and Slit Patterns in Aluminum Films. IEICE Transactions on Electronics, 2016, E99.C, 358-364.	0.3	1
85	Optimization Methods for Electromechanical Systems. Simulation Foundations, Methods and Applications, 2014, , 41-59.	0.8	1
86	Application of Trefftz-Type Sensitivity Analysis Scheme to Two-Dimensional Potential Problem and Its Implementation to Cluster Computing System.. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 1997, 63, 1518-1524.	0.2	0
87	Structural Optimization for the Design of Band-Gap Structures Using Discrete Structural Elements. , 2006, , .		0
88	A Level Set Based Topology Optimization Method Using the Augmented Lagrangian Method(Mechanical) Tj ETQq0 0 0 rgBT /Overlock 1 Engineers, Part C, 2009, 75, 3192-3200.	0.2	0
89	A Level Set-Based Topology Optimization Method Using the Augmented Lagrangian Method. Journal of Environment and Engineering, 2011, 6, 387-399.	0.2	0
90	Phase measurement interferometric microscopy of stacked fishnet metamaterials. , 2012, , .		0

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91	Topology optimization method using multistep mapping from 2D photomask to 3D MEMS. , 2013, , .		0
92	Adjoint variable method for general material models towards efficient sensitivity analysis of subwavelength structures. Proceedings of SPIE, 2013, , .	0.8	0
93	Wideband sensitivity analysis of plasmonic structures. , 2013, , .		0
94	Novel Design Concept of Planar Litz Winding Without Via Using Folded Printed Circuit Board. , 2013, , .		0
95	Thermal Metamaterials for Heat Flow Control in Electronics. , 2017, , .		0
96	110 Multidisciplinary topology optimization of structural mechanics and electromagnetics. The Proceedings of the Computational Mechanics Conference, 2006, 2006.19, 39-40.	0.0	0
97	111 Topology Optimization of Waveguides with Specified Frequency Characteristics. The Proceedings of the Computational Mechanics Conference, 2006, 2006.19, 41-42.	0.0	0
98	3130 Topology Optimization Using Commercial Software COMSOL. The Proceedings of the JSME Annual Meeting, 2007, 2007.6, 319-320.	0.0	0
99	F09(5) Topology optimization for electromagnetic wave propagation problems. The Reference Collection of Annual Meeting, 2007, 2007.8, 228-229.	0.0	0
100	3311 Design of Electro-magnetic Waveguide Based on Topology Optimization. The Proceedings of the JSME Annual Meeting, 2008, 2008.7, 189-190.	0.0	0
101	511 Design of millimeterwave devices using Topology Optimization. The Proceedings of the Computational Mechanics Conference, 2008, 2008.21, 225-226.	0.0	0
102	1308 Thermal Stress Relaxation of Multi-layered Structures by Shape and Topology Optimization. The Proceedings of Design & Systems Conference, 2009, 2009.19, 159-162.	0.0	0
103	2112 A topology optimization method using the signed distance function as the design variables. The Proceedings of the Computational Mechanics Conference, 2009, 2009.22, 404-405.	0.0	0
104	2127 Minimization of Fluid Drag for Two-Dimensional Object in Low Reynolds Number Flow by Topology Optimization. The Proceedings of the Computational Mechanics Conference, 2009, 2009.22, 434-435.	0.0	0
105	J1201-2-3 Topology Optimization for the Design of Frequency Selective Devices. The Proceedings of the JSME Annual Meeting, 2009, 2009.7, 311-312.	0.0	0
106	812 Thermal stress relaxation of multi-layered structures by using fiber reinforced composite material. The Proceedings of the Computational Mechanics Conference, 2010, 2010.23, 381-382.	0.0	0
107	117 Structural optimization of metallic thin film for a wavelength filter using extraordinary optical transmission. The Proceedings of OPTIS, 2010, 2010.9, _117-1_-_117-2_.	0.0	0
108	802 An Optimum Design Method of Filter Structures for Photovoltaic Generation. The Proceedings of the Computational Mechanics Conference, 2010, 2010.23, 365-367.	0.0	0

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109	1902 Optimum Design of Photonic Structures Using Level Set-Based Topology Optimization. The Proceedings of the Computational Mechanics Conference, 2010, 2010.23, 222-224.	0.0	0
110	816 Topology Optimization for designing structure of Super lens. The Proceedings of the Computational Mechanics Conference, 2010, 2010.23, 393-394.	0.0	0
111	107 A metallic waveguide design method based on the level set method. The Proceedings of OPTIS, 2010, 2010.9, _107-1_-_107-6_.	0.0	0
112	119 Fluid field optimization using shape and topology optimization. The Proceedings of OPTIS, 2010, 2010.9, _119-1_-_119-5_.	0.0	0
113	J1202-2-2 Structural optimization of subwavelength nano hole array. The Proceedings of the JSME Annual Meeting, 2010, 2010.7, 303-304.	0.0	0
114	2303 Compliant mechanism design using a level set-based topology optimization method incorporated with the ALE method. The Proceedings of Design & Systems Conference, 2011, 2011.21, 302-306.	0.0	0
115	2202 A study on topology optimization of far-infrared lens. The Proceedings of the Computational Mechanics Conference, 2012, 2012.25, 139-141.	0.0	0
116	Nanophotonics Based on Semiconductor-Photonic Crystal/Quantum Dot and Metal-/Semiconductor-Plasmonics. IEICE Transactions on Electronics, 2012, E95-C, 178-187.	0.3	0
117	1111 Construction of a New Boundary Tracking Type Level-set Topology Optimization Method. The Proceedings of Design & Systems Conference, 2013, 2013.23, _1111-1_-_1111-8_.	0.0	0
118	2205 Topology optimization of lens design problem based on the level set method. The Proceedings of the Computational Mechanics Conference, 2013, 2013.26, _2205-1_-_2205-3_.	0.0	0
119	Electromechanical System Simulation and Optimization Studies. Simulation Foundations, Methods and Applications, 2014, , 61-187.	0.8	0
120	2213 Topology optimization of microwave interlayer transmission device on multilayer substrate. Proceedings of the Optimization Symposium, 2014, 2014.11, _2213-1_-_2213-5_.	0.0	0
121	Extensions to New Topics. Simulation Foundations, Methods and Applications, 2014, , 189-197.	0.8	0
122	295 Structural optimization of magnetic devices based on topology optimization using PDE filter. The Proceedings of the Computational Mechanics Conference, 2015, 2015.28, _295-1_-_295-2_.	0.0	0
123	J1240103 Level set based-topology optimization of heat control devices. The Proceedings of Mechanical Engineering Congress Japan, 2015, 2015, _J1240103--_J1240103-.	0.0	0
124	W122007 What FEM software do you recommend for the next generation topology optimization research platform?. The Proceedings of Mechanical Engineering Congress Japan, 2015, 2015, _W122007-1-_W122007-5.	0.0	0
125	Topology Optimization of an Electromagnetic Wave Shielding Device. The Proceedings of Design & Systems Conference, 2017, 2017.27, 1108.	0.0	0
126	Large-Scale Three-Dimensional Anisotropic Topology Optimization of Variable-Axial Composite Structures. , 2020, , .		0