

Tsuyoshi Nomura

List of Publications by Year in descending order

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1854
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#	ARTICLE	IF	CITATIONS
1	Large-Scale Three-Dimensional Anisotropic Topology Optimization of Variable-Axial Lightweight Composite Structures. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2022, 144, .	1.7	5
2	Inverse design of three-dimensional fiber reinforced composites with spatially-varying fiber size and orientation using multiscale topology optimization. <i>Composite Structures</i> , 2022, 279, 114768.	3.1	18
3	Inverse design of microreactor flow fields through anisotropic porous media optimization and dehomogenization. <i>Chemical Engineering Journal</i> , 2022, 435, 134587.	6.6	19
4	Topology optimization with wall thickness and piecewise developability constraints for foldable shape-changing structures. <i>Structural and Multidisciplinary Optimization</i> , 2022, 65, 1.	1.7	2
5	A marker-and-cell method for large-scale flow-based topology optimization on GPU. <i>Structural and Multidisciplinary Optimization</i> , 2022, 65, 1.	1.7	4
6	Measurement of low Reynolds number flow emanating from a Turing pattern microchannel array using a modified Bernoulli equation technique. <i>Experimental Thermal and Fluid Science</i> , 2022, 139, 110722.	1.5	6
7	Design of spatially-varying orthotropic infill structures using multiscale topology optimization and explicit de-homogenization. <i>Additive Manufacturing</i> , 2021, 40, 101920.	1.7	13
8	Fabrication and Evaluation of a Magnetically Coupled EMI Filter Designed With Topology Optimization. <i>IEEE Transactions on Power Electronics</i> , 2021, 36, 12620-12630.	5.4	4
9	Anisotropic Multicomponent Topology Optimization for Additive Manufacturing With Build Orientation Design and Stress-Constrained Interfaces. <i>Journal of Computing and Information Science in Engineering</i> , 2021, 21, .	1.7	12
10	Topology Optimization of Manifold Microchannel Heat Sinks. , 2020, , .		8
11	Asymmetric loss-induced perfect sound absorption in duct silencers. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	23
12	Topology optimization of time-transient heat conduction for thermo-optic silicon modulators. <i>International Journal of Heat and Mass Transfer</i> , 2020, 157, 119862.	2.5	5
13	Inverse design of microchannel fluid flow networks using Turing pattern dehomogenization. <i>Structural and Multidisciplinary Optimization</i> , 2020, 62, 2203-2210.	1.7	23
14	Topology optimization of functionally graded anisotropic composite structures using homogenization design method. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 369, 113220.	3.4	48
15	Fano-like Acoustic Resonance for Subwavelength Directional Sensing: 360 Degree Measurement. <i>Advanced Science</i> , 2020, 7, 1903101.	5.6	24
16	Topology optimization of magnetic composite microstructures for electropermanent magnet. <i>Journal of Magnetism and Magnetic Materials</i> , 2020, 503, 166596.	1.0	6
17	Large-Scale Three-Dimensional Anisotropic Topology Optimization of Variable-Axial Composite Structures. , 2020, , .		0
18	Inverse design of structure and fiber orientation by means of topology optimization with tensor field variables. <i>Composites Part B: Engineering</i> , 2019, 176, 107187.	5.9	47

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19	Damped resonance for broadband acoustic absorption in one-port and two-port systems. Scientific Reports, 2019, 9, 13077.	1.6	22
20	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
21	Cross-section optimization of topologically-optimized variable-axial anisotropic composite structures. Composite Structures, 2019, 225, 111150.	3.1	35
22	Ultrasparse Acoustic Absorbers Enabling Fluid Flow and Visible-Light Controls. Physical Review Applied, 2019, 11, .	1.5	57
23	Directional Acoustic Superscattering by Coupled Resonators. Physical Review Applied, 2019, 12, .	1.5	13
24	Asymptotic homogenization of magnetic composite for controllable permanent magnet. Composites Part B: Engineering, 2019, 161, 128-140.	5.9	8
25	Anisotropic Multicomponent Topology Optimization for Additive Manufacturing With Build Orientation Design and Stress-Constrained Interfaces. , 2019, , .		2
26	Thermal Metamaterials for Heat Flow Control in Electronics. Journal of Electronic Packaging, Transactions of the ASME, 2018, 140, .	1.2	39
27	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
28	Orthotropic material orientation optimization method in composite laminates. Structural and Multidisciplinary Optimization, 2018, 57, 815-828.	1.7	26
29	Multi-Component Topology Optimization for Powder Bed Additive Manufacturing (MTO-A). , 2018, , .		6
30	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
31	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
32	Topology optimization for continuous and discrete orientation design of functionally graded fiber-reinforced composite structures. Composite Structures, 2018, 201, 217-233.	3.1	75
33	Geometric Loss Reduction in Tight Bent Waveguides for Silicon Photonics. , 2018, , .		4
34	Boundary shape design by using PDE filtered design variables. Structural and Multidisciplinary Optimization, 2017, 56, 619-629.	1.7	2
35	Topology optimization of Halbach magnet arrays using isoparametric projection. Journal of Magnetism and Magnetic Materials, 2017, 432, 140-153.	1.0	24
36	Thermal Metamaterials for Heat Flow Control in Electronics. , 2017, , .		0

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37	Topology Optimization of an Electromagnetic Wave Shielding Device. The Proceedings of Design & Systems Conference, 2017, 2017.27, 1108.	0.0	0
38	Collection of low-grade waste heat for enhanced energy harvesting. AIP Advances, 2016, 6, .	0.6	23
39	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
40	Quasi-Static Magnetic Field Shielding Using Longitudinal Mu-Near-Zero Metamaterials. Scientific Reports, 2015, 5, 12764.	1.6	43
41	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
42	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
43	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
44	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
45	J1240103 Level set based-topology optimization of heat control devices. The Proceedings of Mechanical Engineering Congress Japan, 2015, 2015, _J1240103--_J1240103-.	0.0	0
46	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
47	Time domain adjoint sensitivity analysis of electromagnetic problems with nonlinear media. Optics Express, 2014, 22, 10831.	1.7	7
48	Thermal-composite design optimization for heat flux shielding, focusing, and reversal. Structural and Multidisciplinary Optimization, 2014, 49, 59-68.	1.7	62
49	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
50	Multiphysics Simulation. Simulation Foundations, Methods and Applications, 2014, , .	0.8	40
51	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
52	Magnetic Metamaterial Superlens for Increased Range Wireless Power Transfer. Scientific Reports, 2014, 4, 3642.	1.6	138
53	Electromechanical System Simulation and Optimization Studies. Simulation Foundations, Methods and Applications, 2014, , 61-187.	0.8	0
54	Optimization Methods for Electromechanical Systems. Simulation Foundations, Methods and Applications, 2014, , 41-59.	0.8	1

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55	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
56	Extensions to New Topics. Simulation Foundations, Methods and Applications, 2014, , 189-197.	0.8	0
57	Topology optimization for fluid-thermal interaction problems under constant input power. Structural and Multidisciplinary Optimization, 2013, 47, 571-581.	1.7	132
58	Heat flux cloaking, focusing, and reversal in ultra-thin composites considering conduction-convection effects. Applied Physics Letters, 2013, 103, .	1.5	88
59	Topology optimization method using multistep mapping from 2D photomask to 3D MEMS. , 2013, , .		0
60	Topology optimization by a time-dependent diffusion equation. International Journal for Numerical Methods in Engineering, 2013, 93, 795-817.	1.5	13
61	Wavefront control by stacked metal-dielectric hole array with variable hole shapes. Optics Express, 2013, 21, 6153.	1.7	7
62	Planar inductor with quasi-distributed gap core and busbar based planar windings. , 2013, , .		4
63	Adjoint variable method for general material models towards efficient sensitivity analysis of subwavelength structures. Proceedings of SPIE, 2013, , .	0.8	0
64	Wideband sensitivity analysis of plasmonic structures. , 2013, , .		0
65	Novel Design Concept of Planar Litz Winding Without Via Using Folded Printed Circuit Board. , 2013, , .		0
66	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
67	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
68	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
69	Transmission phase control by stacked metal-dielectric hole array with two-dimensional geometric design. Optics Express, 2012, 20, 16092.	1.7	9
70	Adjoint variable method for two-dimensional plasmonic structures. Optics Letters, 2012, 37, 3453.	1.7	5
71	Polarization Filters for Visible Light Consisting of Subwavelength Slits in an Aluminum Film. Journal of Lightwave Technology, 2012, 30, 3463-3467.	2.7	9
72	Phase measurement interferometric microscopy of stacked fishnet metamaterials. , 2012, , .		0

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73	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
74	Compliant mechanism design based on the level set and arbitrary Lagrangian Eulerian methods. Structural and Multidisciplinary Optimization, 2012, 46, 343-354.	1.7	9
75	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
76	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
77	Heat flow control in thermo-magnetic convective systems using engineered magnetic fields. Applied Physics Letters, 2012, 101, 123507.	1.5	13
78	Design Optimization of Magnetic Fluid Cooling System. , 2012, , .		3
79	Level set-based topology optimization targeting dielectric resonator-based composite and left-handed transmission lines. International Journal for Numerical Methods in Engineering, 2012, 89, 1272-1295.	1.5	14
80	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
81	Nanophotonics Based on Semiconductor-Photonic Crystal/Quantum Dot and Metal-/Semiconductor-Plasmonics. IEICE Transactions on Electronics, 2012, E95-C, 178-187.	0.3	0
82	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
83	A Level Set-Based Topology Optimization Method Using the Augmented Lagrangian Method. Journal of Environment and Engineering, 2011, 6, 387-399.	0.2	0
84	Topology Optimization of the Stator for Minimizing Cogging Torque of IPM Motors. IEEE Transactions on Magnetics, 2011, 47, 3024-3027.	1.2	63
85	Simultaneous Design Optimization of Permanent Magnet, Coils, and Ferromagnetic Material in Actuators. IEEE Transactions on Magnetics, 2011, 47, 4712-4716.	1.2	36
86	Heaviside projection based topology optimization by a PDE-filtered scalar function. Structural and Multidisciplinary Optimization, 2011, 44, 19-24.	1.7	190
87	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
88	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
89	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
90	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

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91	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
92	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
93	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
94	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
95	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
96	816 Topology Optimization for designing structure of Super lens. The Proceedings of the Computational Mechanics Conference, 2010, 2010.23, 393-394.	0.0	0
97	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
98	119 Fluid field optimization using shape and topology optimization. The Proceedings of OPTIS, 2010, 2010.9, _119-1_-_119-5_.	0.0	0
99	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
100	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.	0.0 0.2	0
101	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
102	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
103	RGB color filter comprising aluminum film with surface plasmon enhanced transmission through sub-wavelength hole-arrays. , 2009, , .		6
104	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
105	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
106	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
107	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
108	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

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109	511 Design of millimeterwave devices using Topology Optimization. The Proceedings of the Computational Mechanics Conference, 2008, 2008.21, 225-226.	0.0	0
110	A study on miniaturization of antenna loaded with magnetic materials by using topology optimization. , 2007, , .		3
111	Metamaterials for automotive applications. , 2007, , .		7
112	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
113	Topology Optimization of Multiband Dielectric Resonator Antennas Using Finite-Difference Time-Domain Method. , 2007, , .		4
114	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
115	Application of Topology Optimization to H-Plane Waveguide Component. IEICE Transactions on Electronics, 2007, E90-C, 282-287.	0.3	6
116	3130 Topology Optimization Using Commercial Software COMSOL. The Proceedings of the JSME Annual Meeting, 2007, 2007.6, 319-320.	0.0	0
117	F09(5) Topology optimization for electromagnetic wave propagation problems. The Reference Collection of Annual Meeting, 2007, 2007.8, 228-229.	0.0	0
118	Structural Optimization for the Design of Band-Gap Structures Using Discrete Structural Elements. , 2006, , .		0
119	Design of optical circuit devices based on topology optimization. IEEE Photonics Technology Letters, 2006, 18, 850-852.	1.3	50
120	Steerable Composite Right/Left-Handed Leaky Wave Antenna for Automotive Radar Applications. , 2006, , .		5
121	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
122	110 Multidisciplinary topology optimization of structural mechanics and electromagnetics. The Proceedings of the Computational Mechanics Conference, 2006, 2006.19, 39-40.	0.0	0
123	111 Topology Optimization of Waveguides with Specified Frequency Characteristics. The Proceedings of the Computational Mechanics Conference, 2006, 2006.19, 41-42.	0.0	0
124	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
125	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
126	Electronically Scanned Left-Handed Leaky Wave Antenna for Millimeter-Wave Automotive Applications. , 0, , .		10