

Giuseppe Castaldi

List of Publications by Year in descending order

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108
papers

4,595
citations

185998

28
h-index

98622

67
g-index

110
all docs

110
docs citations

110
times ranked

4266
citing authors

#	ARTICLE	IF	CITATIONS
1	Performing Mathematical Operations with Metamaterials. <i>Science</i> , 2014, 343, 160-163.	6.0	757
2	Space-time-coding digital metasurfaces. <i>Nature Communications</i> , 2018, 9, 4334.	5.8	728
3	An upper limit on the stochastic gravitational-wave background of cosmological origin. <i>Nature</i> , 2009, 460, 990-994.	13.7	303
4	Breaking Reciprocity with Space-Time-Coding Digital Metasurfaces. <i>Advanced Materials</i> , 2019, 31, e1904069.	11.1	208
5	$P > T$ Metamaterials via Complex-Coordinate Transformation Optics. <i>Physical Review Letters</i> . 2013. 110. 173901.	2.9	176
6	Beating the Spin-Down Limit on Gravitational Wave Emission from the Crab Pulsar. <i>Astrophysical Journal</i> , 2008, 683, L45-L49.	1.6	160
7	SEARCHES FOR GRAVITATIONAL WAVES FROM KNOWN PULSARS WITH SCIENCE RUN 5 LIGO DATA. <i>Astrophysical Journal</i> , 2010, 713, 671-685.	1.6	155
8	Implications for the Origin of GRB 070201 from LIGO Observations. <i>Astrophysical Journal</i> , 2008, 681, 1419-1430.	1.6	143
9	Coding Metasurfaces for Diffuse Scattering: Scaling Laws, Bounds, and Suboptimal Design. <i>Advanced Optical Materials</i> , 2017, 5, 1700455.	3.6	123
10	Optical fiber meta-tips. <i>Light: Science and Applications</i> , 2017, 6, e16226-e16226.	7.7	122
11	All-Sky LIGO Search for Periodic Gravitational Waves in the Early Fifth-Science-Run Data. <i>Physical Review Letters</i> , 2009, 102, 111102.	2.9	83
12	Tunneling of obliquely incident waves through $P > T$ -symmetric epsilon-near-zero bilayers. <i>Physical Review B</i> , 2014, 89, .	1.1	83
13	Search for gravitational-wave bursts in LIGO data from the fourth science run. <i>Classical and Quantum Gravity</i> , 2007, 24, 5343-5369.	1.5	78
14	Search for Gravitational-Wave Bursts from Soft Gamma Repeaters. <i>Physical Review Letters</i> , 2008, 101, 211102.	2.9	69
15	$P > T$ -symmetry-induced wave confinement and guiding in $\hat{\mu}$ -near-zero metamaterials. <i>Physical Review B</i> , 2015, 91, .	1.1	63
16	SEARCH FOR GRAVITATIONAL-WAVE BURSTS ASSOCIATED WITH GAMMA-RAY BURSTS USING DATA FROM LIGO SCIENCE RUN 5 AND VIRGO SCIENCE RUN 1. <i>Astrophysical Journal</i> , 2010, 715, 1438-1452.	1.6	60
17	Cloak/anti-cloak interactions. <i>Optics Express</i> , 2009, 17, 3101.	1.7	52
18	Joint Multi-Frequency Beam Shaping and Steering via Space-Time-Coding Digital Metasurfaces. <i>Advanced Functional Materials</i> , 2021, 31, 2007620.	7.8	52

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19	Nonlocal Transformation Optics. <i>Physical Review Letters</i> , 2012, 108, 063902.	2.9	50
20	Independent Manipulation of Heat and Electrical Current via Bifunctional Metamaterials. <i>Physical Review X</i> , 2014, 4, .	2.8	48
21	STACKED SEARCH FOR GRAVITATIONAL WAVES FROM THE 2006 SGR 1900+14 STORM. <i>Astrophysical Journal</i> , 2009, 701, L68-L74.	1.6	45
22	AN EXACT SYNTHESIS METHOD FOR DUAL-BAND CHEBYSHEV IMPEDANCE TRANSFORMERS. <i>Progress in Electromagnetics Research</i> , 2008, 86, 305-319.	1.6	41
23	Excitation of Bloch Surface Waves on an Optical Fiber Tip. <i>Advanced Optical Materials</i> , 2018, 6, 1800477.	3.6	38
24	Exploiting space-time duality in the synthesis of impedance transformers via temporal metamaterials. <i>Nanophotonics</i> , 2021, 10, 3687-3699.	2.9	35
25	Evidence of local effects in anomalous refraction and focusing properties of dodecagonal photonic quasicrystals. <i>Physical Review B</i> , 2008, 77, .	1.1	34
26	General class of metamaterial transformation slabs. <i>Physical Review B</i> , 2010, 81, .	1.1	31
27	Electromagnetic tunneling through a single-negative slab paired with a double-positive bilayer. <i>Physical Review B</i> , 2011, 83, .	1.1	31
28	Suboptimal Coding Metasurfaces for Terahertz Diffuse Scattering. <i>Scientific Reports</i> , 2018, 8, 11908.	1.6	29
29	Line Waves in Non-Hermitian Metasurfaces. <i>ACS Photonics</i> , 2020, 7, 2064-2072.	3.2	29
30	Evidence of guided resonances in photonic quasicrystal slabs. <i>Physical Review B</i> , 2011, 84, .	1.1	27
31	Analytical study of subwavelength imaging by uniaxial epsilon-near-zero metamaterial slabs. <i>Physical Review B</i> , 2012, 86, .	1.1	27
32	Astrophysically triggered searches for gravitational waves: status and prospects. <i>Classical and Quantum Gravity</i> , 2008, 25, 114051.	1.5	26
33	Reconfigurable anisotropy and functional transformations with ϵ metamaterial electric circuits. <i>Physical Review B</i> , 2015, 91, .	1.6	26
34	Supersymmetry-Inspired Non-Hermitian Optical Couplers. <i>Scientific Reports</i> , 2015, 5, 8568.	1.6	26
35	Non-Hermitian doping of epsilon-near-zero media. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 13921-13928.	3.3	25
36	Optical isolation via unidirectional resonant photon tunneling. <i>Journal of Applied Physics</i> , 2014, 115, .	1.1	24

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37	Dispersion engineering via nonlocal transformation optics. <i>Optica</i> , 2016, 3, 179.	4.8	24
38	Optimized multilayer dielectric mirror coatings for gravitational wave interferometers. , 2006, , .		22
39	First joint search for gravitational-wave bursts in LIGO and GEO 600 data. <i>Classical and Quantum Gravity</i> , 2008, 25, 245008.	1.5	22
40	Analytical study of spherical cloak/anti-cloak interactions. <i>Wave Motion</i> , 2011, 48, 455-467.	1.0	21
41	Grating-coupling-based excitation of Bloch surface waves for lab-on-fiber optrodes. <i>Optics Express</i> , 2016, 24, 27771.	1.7	21
42	Transformation Media for Thin Planar Retrodirective Reflectors. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2008, 7, 603-605.	2.4	20
43	Tuning efficiency and sensitivity of guided resonances in photonic crystals and quasi-crystals: a comparative study. <i>Optics Express</i> , 2010, 18, 17280.	1.7	20
44	Power scattering and absorption mediated by cloak/anti-cloak interactions: a transformation-optics route toward invisible sensors. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2010, 27, 2132.	0.9	20
45	Optical nonlocality in multilayered hyperbolic metamaterials based on Thue-Morse superlattices. <i>Physical Review B</i> , 2013, 87, .	1.1	20
46	Short-Pulsed Metamaterials. <i>Physical Review Letters</i> , 2022, 128, .	2.9	20
47	Mode confinement in photonic quasicrystal point-defect cavities for particle accelerators. <i>Applied Physics Letters</i> , 2008, 93, 164102.	1.5	18
48	EVALUATION OF A NEURAL-NETWORK-BASED ADAPTIVE BEAMFORMING SCHEME WITH MAGNITUDE-ONLY CONSTRAINTS. <i>Progress in Electromagnetics Research B</i> , 2009, 11, 1-14.	0.7	18
49	Transformation-Optics-Based Design of a Metamaterial Radome for Extending the Scanning Angle of a Phased-Array Antenna. <i>IEEE Journal on Multiscale and Multiphysics Computational Techniques</i> , 2017, 2, 159-167.	1.4	17
50	A dual-band Chebyshev impedance transformer. <i>Microwave and Optical Technology Letters</i> , 2003, 39, 141-145.	0.9	16
51	Enhanced Faraday rotation via resonant tunnelling in tri-layers containing magneto-optical metals. <i>Journal Physics D: Applied Physics</i> , 2014, 47, 025002.	1.3	16
52	Non-Hermiticity-induced wave confinement and guiding in loss-gain-loss three-layer systems. <i>Physical Review A</i> , 2016, 94, .	1.0	16
53	Magnified imaging based on non-Hermitian nonlocal cylindrical metasurfaces. <i>Physical Review B</i> , 2017, 95, .	1.1	15
54	Guided resonances in photonic quasicrystals. <i>Optics Express</i> , 2009, 17, 6335-46.	1.7	15

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55	Hybrid photonic-bandgap accelerating cavities. <i>New Journal of Physics</i> , 2009, 11, 113022.	1.2	13
56	Nonreciprocal Metasurfaces: Breaking Reciprocity with Space-Time Coding Digital Metasurfaces (Adv.) <i>Tj ETQq0,0 rgBT/Overlock</i>	11.1	13
57	Extreme-Parameter Non-Hermitian Dielectric Metamaterials. <i>ACS Photonics</i> , 2020, 7, 2578-2588.	3.2	12
58	Guided resonances in photonic crystals with point-defected aperiodically-ordered supercells. <i>Optics Express</i> , 2009, 17, 19586.	1.7	11
59	Nearly perfect nonmagnetic invisibility cloaking: Analytic solutions and parametric studies. <i>Physical Review B</i> , 2009, 80, .	1.1	11
60	Harnessing Spectral Singularities in Non- Hermitian Cylindrical Structures. <i>IEEE Transactions on Antennas and Propagation</i> , 2020, 68, 1704-1716.	3.1	11
61	Exceptional Points in Flat Optics: A Non-Hermitian Line-Wave Scenario. <i>Physical Review Applied</i> , 2021, 15, .	1.5	11
62	Recent advances and perspectives on space-time coding digital metasurfaces. <i>EPJ Applied Metamaterials</i> , 2020, 7, 7.	0.8	11
63	Nonlocal effects in temporal metamaterials. <i>Nanophotonics</i> , 2022, 11, 1285-1295.	2.9	11
64	Efficient Faulty Element Diagnostics of Large Antenna Arrays by Discrete Mean Field Neural Nets. <i>Progress in Electromagnetics Research</i> , 2000, 25, 53-76.	1.6	10
65	Analytic structure of a family of hyperboloidal beams of potential interest for advanced LIGO. <i>Physical Review D</i> , 2006, 73, .	1.6	10
66	Electromagnetic tunneling of obliquely incident waves through a single-negative slab paired with a double-positive uniaxial slab. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2011, 28, 2362.	0.9	10
67	Aperiodic order induced enhancement of weak nonlocality in multilayered dielectric metamaterials. <i>Physical Review B</i> , 2018, 98, .	1.1	10
68	Boundary Effects of Weak Nonlocality in Multilayered Dielectric Metamaterials. <i>Physical Review Applied</i> , 2018, 10, .	1.5	10
69	Surface-Wave Propagation on Non-Hermitian Metasurfaces With Extreme Anisotropy. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2021, 69, 2060-2071.	2.9	10
70	Experimental evidence of cut-wire-induced enhanced transmission of transverse-electric fields through sub-wavelength slits in a thin metallic screen. <i>Optics Express</i> , 2010, 18, 26769.	1.7	9
71	Genetically Optimized Metasurface Pairs for Wideband Out-of-Phase Mutual Response. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2008, 7, 788-791.	2.4	7
72	Anomalous light transport induced by deeply subwavelength quasiperiodicity in multilayered dielectric metamaterials. <i>Physical Review B</i> , 2020, 102, .	1.1	7

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73	A higher-order optical transformation for nonmagnetic cloaking. Microwave and Optical Technology Letters, 2008, 50, 3186-3190.	0.9	6
74	Degenerate-band-edge engineering inspired by nonlocal transformation optics. EPJ Applied Metamaterials, 2016, 3, 2.	0.8	6
75	Effects of deterministic disorder at deeply subwavelength scales in multilayered dielectric metamaterials. Optics Express, 2020, 28, 10199.	1.7	5
76	Perspectives on beam-shaping optimization for thermal-noise reduction in advanced gravitational-wave interferometric detectors: Bounds, profiles, and critical parameters. Physical Review D, 2007, 76, .	1.6	4
77	Efficient Faulty Element Diagnostics of Large Antenna Arrays By Discrete Mean Field Neural Nets - Abstract *. Journal of Electromagnetic Waves and Applications, 1999, 13, 1685-1686.	1.0	3
78	Radiation from Fibonacci-type Quasiperiodic Arrays on Dielectric Substrates. Journal of Electromagnetic Waves and Applications, 2007, 21, 1231-1245.	1.0	3
79	Scattering Properties of One-Dimensional Aperiodically-Ordered Strip Arrays Based on Two-Symbol Substitutional Sequences. IEEE Transactions on Antennas and Propagation, 2007, 55, 1554-1563.	3.1	3
80	Parametric study of guided resonances in octagonal photonic quasicrystals. Microwave and Optical Technology Letters, 2009, 51, 2737-2740.	0.9	3
81	A transformation-optics-inspired route to sensor invisibility based on cloak/anti-cloak interactions. , 2010, , .		3
82	Short-Pulsed Wavepacket Propagation in Ray-Chaotic Enclosures. IEEE Transactions on Antennas and Propagation, 2012, 60, 3827-3837.	3.1	3
83	A Study of Ray-Chaotic Cylindrical Scatterers. IEEE Transactions on Antennas and Propagation, 2008, 56, 2638-2648.	3.1	2
84	Synthesizing quasi-bound states in the continuum in epsilon-near-zero layered materials. Applied Physics Letters, 2021, 119, 171110.	1.5	2
85	Transformation optics-inspired metamaterial coatings for controlling the scattering response of wedge/corner-type structures. Microwave and Optical Technology Letters, 2009, 51, 2709-2712.	0.9	1
86	Paired Cut-Wire Arrays for Enhanced Transmission of Transverse-Electric Fields Through Subwavelength Slits in a Thin Metallic Screen. IEEE Antennas and Wireless Propagation Letters, 2010, 9, 641-644.	2.4	1
87	Electromagnetic funneling through a single-negative slab paired with a double-positive transformation slab. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2013, 32, 1821-1833.	0.5	1
88	Optical fiber meta-tips: perspectives in sensing applications. Proceedings of SPIE, 2017, , .	0.8	1
89	Analytic structure and generalized duality relations for a family of hyperboloidal beams and supporting mirrors of potential interest for future gravitational wave detection interferometers. , 2006, , .		0
90	Analytic Properties of a Class of Hyperboloidal Beams in Nearly-Spheroidal Fabry-Perot Optical Cavities. , 2007, , .		0

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91	Progress and Challenges Developing a Coating for Next Generation Gravitational-wave Detectors. , 2007, , .		0
92	A Study of cloak/anti-cloak interactions. , 2009, , .		0
93	Selected Applications of Transformation Electromagnetics. Advances in Science and Technology, 2010, 75, 246-255.	0.2	0
94	IN-PLANE PROPAGATION IN PHOTONIC QUASI-CRYSTALS: BAND-GAP, CONFINEMENT, AND FOCUSING. , 2011, , 47-74.		0
95	OUT-OF-PLANE PROPAGATION IN PHOTONIC QUASI-CRYSTALS: GUIDED RESONANCES. , 2011, , 75-111.		0
96	A random-plane-wave model for short-pulse-excited ray-chaotic enclosures. , 2012, , .		0
97	Scattering vs. absorption tradeoff revisited in the presence of transformation media. , 2012, , .		0
98	Controlling nonlocal light-matter interactions via spectral-domain transformation optics. , 2012, , .		0
99	Complex-coordinate transformation optics as a route to PT-metamaterials. , 2013, , .		0
100	Optical nonlocality in aperiodically-ordered multilayered hyperbolic metamaterials. , 2013, , .		0
101	Metastructures for signal manipulation. , 2013, , .		0
102	Wave tunneling through parity-time-symmetric epsilon-near-zero bi-layers. , 2014, , .		0
103	Parity-time-symmetric epsilon-near-zero metamaterials. , 2014, , .		0
104	Dispersion engineering via nonlocal transformation optics. , 2015, , .		0
105	Optical fiber meta-tips. Proceedings of SPIE, 2016, , .	0.8	0
106	Wave Propagation and Field Manipulation in Non-Hermitian Metamaterials. , 2018, , 545-567.		0
107	Some Recent Advances in Space- Time-Coding Metasurfaces. , 2021, , .		0
108	Modeling and Harnessing Wave Propagation in Nonlocal and Non-Hermitian Media via Extended Transformation Optics. , 2021, , .		0