

# Daniel Torrent

## List of Publications by Year in descending order

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Version: 2024-02-01

79  
papers

3,725  
citations

109321

35  
h-index

128289

60  
g-index

83  
all docs

83  
docs citations

83  
times ranked

1823  
citing authors

#	ARTICLE	IF	CITATIONS
1	Acoustic cloaking in two dimensions: a feasible approach. <i>New Journal of Physics</i> , 2008, 10, 063015.	2.9	343
2	Acoustic metamaterials for new two-dimensional sonic devices. <i>New Journal of Physics</i> , 2007, 9, 323-323.	2.9	213
3	Sound focusing by gradient index sonic lenses. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	175
4	Anisotropic mass density by two-dimensional acoustic metamaterials. <i>New Journal of Physics</i> , 2008, 10, 023004.	2.9	163
5	Omnidirectional broadband acoustic absorber based on metamaterials. <i>Applied Physics Letters</i> , 2012, 100, .	3.3	143
6	Elastic analog of graphene: Dirac cones and edge states for flexural waves in thin plates. <i>Physical Review B</i> , 2013, 87, .	3.2	140
7	Acoustic Analogue of Graphene: Observation of Dirac Cones in Acoustic Surface Waves. <i>Physical Review Letters</i> , 2012, 108, 174301.	7.8	135
8	Sonic gradient index lens for aqueous applications. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	133
9	Homogenization of Two-Dimensional Clusters of Rigid Rods in Air. <i>Physical Review Letters</i> , 2006, 96, 204302.	7.8	120
10	Gradient index phononic crystals and metamaterials. <i>Nanophotonics</i> , 2019, 8, 685-701.	6.0	108
11	Gradient index lenses for flexural waves based on thickness variations. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	107
12	Anisotropic Mass Density by Radially Periodic Fluid Structures. <i>Physical Review Letters</i> , 2010, 105, 174301.	7.8	105
13	Effective parameters of clusters of cylinders embedded in a nonviscous fluid or gas. <i>Physical Review B</i> , 2006, 74, .	3.2	94
14	Noise control by sonic crystal barriers made of recycled materials. <i>Journal of the Acoustical Society of America</i> , 2011, 129, 1173-1183.	1.1	91
15	Radial Wave Crystals: Radially Periodic Structures from Anisotropic Metamaterials for Engineering Acoustic or Electromagnetic Waves. <i>Physical Review Letters</i> , 2009, 103, 064301.	7.8	82
16	Nonreciprocal Thermal Material by Spatiotemporal Modulation. <i>Physical Review Letters</i> , 2018, 120, 125501.	7.8	81
17	Quasi-two-dimensional acoustic metamaterial with negative bulk modulus. <i>Physical Review B</i> , 2012, 85, .	3.2	71
18	Negative mass density and $\kappa$ -near-zero quasi-two-dimensional metamaterials: Design and applications. <i>Physical Review B</i> , 2013, 88, .	3.2	64

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19	Robustness of conventional and topologically protected edge states in phononic crystal plates. <i>Physical Review B</i> , 2018, 98, .	3.2	64
20	Acoustic anomalous reflectors based on diffraction grating engineering. <i>Physical Review B</i> , 2018, 98, .	3.2	57
21	Acoustic resonances in two-dimensional radial sonic crystal shells. <i>New Journal of Physics</i> , 2010, 12, 073034.	2.9	55
22	Simultaneous control of the $S$ and $A$ Lamb modes by graded phononic crystal plates. <i>Journal of Applied Physics</i> , 2015, 117, .	2.5	55
23	Majorana-like Zero Modes in Kekulé Distorted Sonic Lattices. <i>Physical Review Letters</i> , 2019, 123, 196601.	7.8	55
24	Intelligent on-demand design of phononic metamaterials. <i>Nanophotonics</i> , 2022, 11, 439-460.	6.0	55
25	Engineered Diffraction Gratings for Acoustic Cloaking. <i>Physical Review Applied</i> , 2019, 11, .	3.8	54
26	Inverse design of topological metaplates for flexural waves with machine learning. <i>Materials and Design</i> , 2021, 199, 109390.	7.0	42
27	Effective medium theory for elastic metamaterials in thin elastic plates. <i>Physical Review B</i> , 2014, 90, .	3.2	41
28	Topological states in twisted pillared phononic plates. <i>Extreme Mechanics Letters</i> , 2020, 39, 100777.	4.1	41
29	Gradient Index Devices for the Full Control of Elastic Waves in Plates. <i>Scientific Reports</i> , 2016, 6, 24437.	3.3	40
30	Quenching of acoustic bandgaps by flow noise. <i>Applied Physics Letters</i> , 2009, 94, .	3.3	38
31	Multiple scattering formulation of two-dimensional acoustic and electromagnetic metamaterials. <i>New Journal of Physics</i> , 2011, 13, 093018.	2.9	38
32	Omnidirectional refractive devices for flexural waves based on graded phononic crystals. <i>Journal of Applied Physics</i> , 2014, 116, .	2.5	37
33	Ultrathin Acoustic Parity-Time Symmetric Metasurface Cloak. <i>Research</i> , 2019, 2019, 8345683.	5.7	37
34	Resonant and nonlocal properties of phononic metasolids. <i>Physical Review B</i> , 2015, 92, .	3.2	36
35	Mechanical Analogue of a Majorana Bound State. <i>Advanced Materials</i> , 2019, 31, e1904386.	21.0	35
36	Inverse Grating Problem: Efficient Design of Anomalous Flexural Wave Reflectors and Refractors. <i>Physical Review Applied</i> , 2019, 11, .	3.8	33

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37	Omnidirectional broadband insulating device for flexural waves in thin plates. <i>Journal of Applied Physics</i> , 2013, 114, .	2.5	32
38	Transparent Gradient-Index Lens for Underwater Sound Based on Phase Advance. <i>Physical Review Applied</i> , 2015, 4, .	3.8	32
39	Valley Hall phases in kagome lattices. <i>Physical Review B</i> , 2019, 99, .	3.2	31
40	Broadband acoustic cloaks based on the homogenization of layered materials. <i>Wave Motion</i> , 2011, 48, 497-504.	2.0	25
41	Dipolar Localization of Waves in Twisted Phononic Crystal Plates. <i>Physical Review Applied</i> , 2021, 15, .	3.8	25
42	Double-negative acoustic metamaterials based on quasi-two-dimensional fluid-like shells. <i>New Journal of Physics</i> , 2012, 14, 103052.	2.9	24
43	Experimental realization of broadband tunable resonators based on anisotropic metafluids. <i>Applied Physics Letters</i> , 2011, 98, .	3.3	23
44	Loss compensation in time-dependent elastic metamaterials. <i>Physical Review B</i> , 2018, 97, .	3.2	23
45	Strong spatial dispersion in time-modulated dielectric media. <i>Physical Review B</i> , 2020, 102, .	3.2	23
46	Dynamic homogenization theory for nonlocal acoustic metamaterials. <i>Extreme Mechanics Letters</i> , 2017, 12, 71-76.	4.1	21
47	Multiple scattering theory of non-Hermitian sonic second-order topological insulators. <i>Communications Physics</i> , 2019, 2, .	5.3	21
48	Directional acoustic source by scattering acoustical elements. <i>Applied Physics Letters</i> , 2007, 90, 224107.	3.3	20
49	Sound scattering by anisotropic metafluids based on two-dimensional sonic crystals. <i>Physical Review B</i> , 2009, 79, .	3.2	18
50	Edge modes for flexural waves in quasi-periodic linear arrays of scatterers. <i>APL Materials</i> , 2021, 9, .	5.1	17
51	Homogenization theory for periodic distributions of elastic cylinders embedded in a viscous fluid. <i>Journal of the Acoustical Society of America</i> , 2012, 132, 2896-2908.	1.1	16
52	Radial Photonic Crystal Shells and Their Application as Resonant and Radiating Elements. <i>IEEE Transactions on Antennas and Propagation</i> , 2013, 61, 755-767.	5.1	16
53	Invisible omnidirectional lens for flexural waves in thin elastic plates. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 225301.	2.8	16
54	Radial Photonic Crystal for detection of frequency and position of radiation sources. <i>Scientific Reports</i> , 2012, 2, 558.	3.3	15

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55	Analysis of flexural wave cloaks. AIP Advances, 2016, 6, .	1.3	15
56	Evidence of two-dimensional magic clusters in the scattering of sound. Physical Review B, 2007, 75, .	3.2	14
57	Reduced acoustic cloaks based on temperature gradients. Applied Physics Letters, 2012, 101, 084103.	3.3	14
58	Metaclusters for the Full Control of Mechanical Waves. Physical Review Applied, 2021, 15, .	3.8	13
59	Multidisciplinary approach to cylindrical anisotropic metamaterials. New Journal of Physics, 2011, 13, 103034.	2.9	12
60	Multimodal and omnidirectional beam splitters for Lamb modes in elastic plates. AIP Advances, 2016, 6, 121602.	1.3	12
61	Analytical modeling of one-dimensional resonant asymmetric and reciprocal acoustic structures as Willis materials. New Journal of Physics, 2021, 23, 053020.	2.9	10
62	Homogenization of piezoelectric planar Willis materials undergoing antiplane shear. Wave Motion, 2022, 108, 102833.	2.0	10
63	Acoustic transparency in two-dimensional sonic crystals. New Journal of Physics, 2009, 11, 013039.	2.9	8
64	Generalized elastodynamic model for nanophotonics. Physical Review B, 2020, 102, .	3.2	7
65	Extraordinary absorption by a thin dielectric slab backed with a metasurface. Physical Review B, 2014, 89, .	3.2	6
66	Dynamic homogenization of viscoelastic phononic metasolids. AIP Advances, 2016, 6, 121705.	1.3	5
67	Broadband Asymmetric Propagation in Pillared Meta-Plates. Crystals, 2020, 10, 702.	2.2	4
68	Anisotropic metamaterials as sensing devices in acoustics and electromagnetism. Proceedings of SPIE, 2012, , .	0.8	3
69	Direct retrieval method of the effective permittivity and permeability of bulk semi-infinite metamaterials by variable-angle spectroscopic ellipsometry. OSA Continuum, 2019, 2, 1762.	1.8	3
70	Noise Reduction by Perfect Absorbers Based on Acoustic Metamaterials. , 2011, , .		2
71	Low-Q whispering gallery modes in anisotropic metamaterial shells. Physical Review B, 2013, 88, .	3.2	2
72	Non-locality of the Willis coupling in fluid laminates. Wave Motion, 2022, 110, 102892.	2.0	2

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73	Far-Field Perfect Imaging with Time-Modulated Gratings. Physical Review Applied, 2022, 17, .	3.8	1
74	Acoustic Properties of Fluidlike Metamaterials Based on Sonic Crystals. , 2007, , 1103.		0
75	Acoustic metamaterials based on the homogenization of periodic scatterers. Proceedings of SPIE, 2011, , .	0.8	0
76	Acoustic Cloaking via Homogenization. Springer Series in Materials Science, 2013, , 219-239.	0.6	0
77	Negative and density-near-zero acoustic metamaterials based on quasi-two-dimensional phononic crystals.. Proceedings of Meetings on Acoustics, 2013, , .	0.3	0
78	Flat bands in metamaterials based on angularly layered metalâ€“dielectric scatterers. Journal Physics D: Applied Physics, 2017, 50, 125103.	2.8	0
79	Introduction to Multiple Scattering Theory for Scalar Waves. Topics in Applied Physics, 2021, , 43-64.	0.8	0