

Richard L Weaver

List of Publications by Year in descending order

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124
papers

5,176
citations

109321

35
h-index

88630

70
g-index

129
all docs

129
docs citations

129
times ranked

2599
citing authors

#	ARTICLE	IF	CITATIONS
1	On the emergence of the Green's function in the correlations of a diffuse field. Journal of the Acoustical Society of America, 2001, 110, 3011-3017.	1.1	881
2	Ultrasonics without a Source: Thermal Fluctuation Correlations at MHz Frequencies. Physical Review Letters, 2001, 87, 134301.	7.8	533
3	Diffuse fields in open systems and the emergence of the Green's function (L). Journal of the Acoustical Society of America, 2004, 116, 2731-2734.	1.1	299
4	On diffuse waves in solid media. Journal of the Acoustical Society of America, 1982, 71, 1608-1609.	1.1	226
5	Coda-Wave Interferometry in Finite Solids: Recovery of P-to-S Conversion Rates in an Elastodynamic Billiard. Physical Review Letters, 2003, 90, 254302.	7.8	172
6	Estimation of the effect of nonisotropically distributed energy on the apparent arrival time in correlations. Geophysics, 2010, 75, SA85-SA93.	2.6	153
7	On the correlation of non-isotropically distributed ballistic scalar diffuse waves. Journal of the Acoustical Society of America, 2009, 126, 1817-1826.	1.1	151
8	Probing the mechanical properties of graphene using a corrugated elastic substrate. Applied Physics Letters, 2011, 98, .	3.3	117
9	Temperature dependence of diffuse field phase. Ultrasonics, 2000, 38, 491-494.	3.9	107
10	A parametric study of laser induced thin film spallation. Experimental Mechanics, 2002, 42, 74-83.	2.0	107
11	GEOPHYSICS: Information from Seismic Noise. Science, 2005, 307, 1568-1569.	12.6	101
12	On the emergence of the Green's function in the correlations of a diffuse field: pulse-echo using thermal phonons. Ultrasonics, 2002, 40, 435-439.	3.9	99
13	Dispersion relations for linear wave propagation in homogeneous and inhomogeneous media. Journal of Mathematical Physics, 1981, 22, 1909-1918.	1.1	97
14	Propagating and evanescent elastic waves in cylindrical waveguides of arbitrary cross section. Journal of the Acoustical Society of America, 2004, 115, 1572-1581.	1.1	97
15	Fluctuations in diffuse field's correlations and the emergence of the Green's function in open systems. Journal of the Acoustical Society of America, 2005, 117, 3432-3439.	1.1	89
16	On the precision of noise correlation interferometry. Geophysical Journal International, 2011, 185, 1384-1392.	2.4	80
17	Radiative transfer and multiple scattering of diffuse ultrasound in polycrystalline media. Journal of the Acoustical Society of America, 1994, 96, 3675-3683.	1.1	78
18	Diffuse elastic waves at a free surface. Journal of the Acoustical Society of America, 1985, 78, 131-136.	1.1	76

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19	Wigner distribution of a transducer beam pattern within a multiple scattering formalism for heterogeneous solids. Journal of the Acoustical Society of America, 2007, 122, 2009-2021.	1.1	64
20	Radiative transfer of ultrasound. Journal of the Acoustical Society of America, 1994, 96, 3654-3674.	1.1	60
21	Elastic wave thermal fluctuations, ultrasonic waveforms by correlation of thermal phonons. Journal of the Acoustical Society of America, 2003, 113, 2611-2621.	1.1	55
22	Observation of a snap-through instability in graphene. Applied Physics Letters, 2012, 100, .	3.3	55
23	Weak Anderson localization and enhanced backscatter in reverberation rooms and quantum dots. Journal of the Acoustical Society of America, 1994, 96, 3186-3190.	1.1	51
24	Tensile and mixed-mode strength of a thin film-substrate interface under laser induced pulse loading. Journal of the Mechanics and Physics of Solids, 2004, 52, 999-1022.	4.8	50
25	Enhanced Backscattering and Modal Echo of Reverberant Elastic Waves. Physical Review Letters, 2000, 84, 4942-4945.	7.8	48
26	Forced response of a cylindrical waveguide with simulation of the wavenumber extraction problem. Journal of the Acoustical Society of America, 2004, 115, 1582-1591.	1.1	48
27	POWER VARIANCES AND DECAY CURVATURE IN A REVERBERANT SYSTEM. Journal of Sound and Vibration, 2000, 237, 281-302.	3.9	42
28	Ward identities and the retrieval of Green's functions in the correlations of a diffuse field. Wave Motion, 2008, 45, 596-604.	2.0	42
29	Diffusion of ultrasound in a glass bead slurry. Journal of the Acoustical Society of America, 1995, 97, 2094-2102.	1.1	41
30	Ultrasonics in an aluminum foam. Ultrasonics, 1998, 36, 435-442.	3.9	41
31	Laser-induced decompression shock development in fused silica. Journal of Applied Physics, 2003, 93, 9529-9536.	2.5	41
32	Micron-scale measurements of the coefficient of thermal expansion by time-domain probe beam deflection. Journal of Applied Physics, 2008, 104, .	2.5	40
33	On the amplitudes of correlations and the inference of attenuations, specific intensities and site factors from ambient noise. Comptes Rendus - Geoscience, 2011, 343, 615-622.	1.2	39
34	Time dependence of multiply scattered diffuse ultrasound in polycrystalline media. Journal of the Acoustical Society of America, 1995, 97, 2639-2644.	1.1	36
35	Equipartition and mean-square responses in large undamped structures. Journal of the Acoustical Society of America, 2001, 110, 894-903.	1.1	36
36	Diffuse fields in ultrasonics and seismology. Geophysics, 2006, 71, SI5-SI9.	2.6	36

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37	Effectiveness of diffuse ultrasound for evaluation of micro-cracking damage in concrete. <i>Cement and Concrete Research</i> , 2019, 124, 105862.	11.0	35
38	Laser vibrometry technique for measurement of contained stress in railroad rail. <i>Journal of Sound and Vibration</i> , 2005, 282, 341-366.	3.9	34
39	The mean and variance of diffuse field correlations in finite bodies. <i>Journal of the Acoustical Society of America</i> , 2005, 118, 3447-3456.	1.1	30
40	On the Development of Transverse Ridges on Rock Glaciers. <i>Journal of Glaciology</i> , 1989, 35, 383-391.	2.2	29
41	Nonexponential Dissipation in a Lossy Elastodynamic Billiard: Comparison with Porter-Thomas and Random Matrix Predictions. <i>Physical Review Letters</i> , 2003, 91, 194101.	7.8	28
42	Avalanche Statistics Identify Intrinsic Stellar Processes near Criticality in KIC 8462852. <i>Physical Review Letters</i> , 2016, 117, 261101.	7.8	27
43	Multiple-scattering theory for mean responses in a plate with sprung masses. <i>Journal of the Acoustical Society of America</i> , 1997, 101, 3466-3474.	1.1	25
44	Statistics of transmitted power in multichannel dissipative ergodic structures. <i>Physical Review E</i> , 2003, 68, 016204.	2.1	25
45	Laboratory studies of diffuse waves in plates. <i>Journal of the Acoustical Society of America</i> , 1986, 79, 919-923.	1.1	24
46	A reanalysis of experimental high-frequency spectra using periodic orbit theory. <i>Journal of the Acoustical Society of America</i> , 1994, 96, 1873-1880.	1.1	24
47	Range of spectral correlations in pseudointegrable systems: Gaussian-orthogonal-ensemble statistics in a rectangular membrane with a point scatterer. <i>Physical Review E</i> , 1995, 52, 3341-3350.	2.1	24
48	Passive correlation imaging of a buried scatterer. <i>Journal of the Acoustical Society of America</i> , 2006, 119, 3549-3552.	1.1	24
49	Transient ultrasonic waves in a viscoelastic plate: Theory. <i>Journal of the Acoustical Society of America</i> , 1989, 85, 2255-2261.	1.1	22
50	A parametric study of laser induced thin film spallation. <i>Experimental Mechanics</i> , 2002, 42, 74-83.	2.0	22
51	Transient ultrasonic waves in a viscoelastic plate: Applications to materials characterization. <i>Journal of the Acoustical Society of America</i> , 1989, 85, 2262-2267.	1.1	21
52	Variance of transmitted power in multichannel dissipative ergodic structures invariant under time reversal. <i>Physical Review E</i> , 2004, 69, 036206.	2.1	21
53	Synchronization and stimulated emission in an array of mechanical phase oscillators on a resonant support. <i>Physical Review E</i> , 2011, 83, 046221.	2.1	21
54	Spectra of transient waves in elastic plates. <i>Journal of the Acoustical Society of America</i> , 1982, 72, 1933-1941.	1.1	19

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55	On the retrieval of attenuation and site amplifications from ambient noise on linear arrays: further numerical simulations. <i>Geophysical Journal International</i> , 2013, 193, 1644-1657.	2.4	17
56	Ultrasonic radiative transfer in polycrystalline media: Effects of a fluid–solid interface. <i>Journal of the Acoustical Society of America</i> , 1995, 98, 2801-2808.	1.1	16
57	On the Larsen effect to monitor small fast changes in materials. <i>Journal of the Acoustical Society of America</i> , 2009, 125, 1894-1905.	1.1	15
58	Equipartition and retrieval of Green’s function. <i>Earthquake Science</i> , 2010, 23, 397-402.	0.9	14
59	Application of the transition matrix to a ribbon-shaped scatterer. <i>Journal of the Acoustical Society of America</i> , 1979, 66, 1199-1206.	1.1	13
60	A variational principle for waves in discrete random media. <i>Wave Motion</i> , 1985, 7, 105-121.	2.0	13
61	Spectral statistics in damped systems. Part I. Modal decay rate statistics. <i>Journal of the Acoustical Society of America</i> , 1996, 100, 320-326.	1.1	13
62	Causality and theories of multiple scattering in random media. <i>Wave Motion</i> , 1986, 8, 473-483.	2.0	12
63	Semiclassical analysis of spectral correlations in regular billiards with point scatterers. <i>Physical Review E</i> , 1997, 55, 7741-7744.	2.1	12
64	Determination of plate source, detector separation from one signal. <i>Ultrasonics</i> , 2000, 38, 620-623.	3.9	12
65	Temporally weighting a time varying noise field to improve Green function retrieval. <i>Journal of the Acoustical Society of America</i> , 2018, 143, 3706-3719.	1.1	12
66	Slow dynamic nonlinearity in unconsolidated glass bead packs. <i>Physical Review E</i> , 2020, 101, 012901.	2.1	12
67	Diffuse Field Decay Rates for Material Characterization. , 1987, , 425-434.		12
68	Mean-square responses in a plate with sprung masses, energy flow and diffusion. <i>Journal of the Acoustical Society of America</i> , 1998, 103, 414-427.	1.1	11
69	Generalized Berry conjecture and mode correlations in chaotic plates. <i>Physical Review E</i> , 2004, 70, 046212.	2.1	11
70	Entrainment and stimulated emission of ultrasonic piezoelectric auto-oscillators. <i>Journal of the Acoustical Society of America</i> , 2007, 122, 3409-3418.	1.1	11
71	DIFFUSE ULTRASOUND IN POLYCRYSTALLINE SOLIDS. , 1991, , 507-510.		10
72	On the time and geometry independence of elastodynamic spectral energy density. <i>Journal of the Acoustical Society of America</i> , 1986, 80, 1539-1541.	1.1	9

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73	Diffuse energy propagation on heterogeneous plates: Structural acoustics radiative transfer theory. Journal of the Acoustical Society of America, 1996, 100, 3686-3695.	1.1	9
74	Transport and localization amongst coupled substructures. Physical Review E, 2006, 73, 036610.	2.1	9
75	Anderson localization of ultrasound in plates: Further experimental results. Journal of the Acoustical Society of America, 2008, 124, 3528-3533.	1.1	9
76	Scattering fidelity in elastodynamics. II. Further experimental results. Physical Review E, 2008, 78, 066212.	2.1	9
77	On band gap predictions for multiresonant metamaterials on plates. Journal of the Acoustical Society of America, 2016, 139, 1282-1284.	1.1	9
78	Effect of annealing on nanoindentation slips in a bulk metallic glass. Physical Review B, 2017, 96, .	3.2	9
79	Avalanches and scaling collapse in the large- N Kuramoto model. Physical Review E, 2018, 97, 042219.	2.1	9
80	Slow dynamic elastic recovery in unconsolidated metal structures. Physical Review E, 2020, 102, 012901.	2.1	9
81	Mode counts in an aluminum foam. Journal of the Acoustical Society of America, 2001, 109, 2636-2641.	1.1	8
82	On the linewidth of the ultrasonic Larsen effect in a reverberant body. Journal of the Acoustical Society of America, 2006, 120, 102-109.	1.1	8
83	Slow dynamics in a single glass bead. Physical Review E, 2020, 101, 012902.	2.1	8
84	The Unreasonable Effectiveness of Random Matrix Theory for the Vibrations and Acoustics of Complex Structures. , 2010, , 42-58.		7
85	Application of temporal reweighting to ambient noise cross-correlation for improved seismic Green's function. Geophysical Journal International, 2020, 221, 265-272.	2.4	7
86	Waves in random media. International Journal of Engineering Science, 1984, 22, 1149-1157.	5.0	6
87	Individual and collective behavior of vibrating motors interacting through a resonant plate. Complexity, 2011, 16, 45-53.	1.6	6
88	Dynamic surface acoustic response to a thermal expansion source on an anisotropic half space. Journal of the Acoustical Society of America, 2013, 133, 2634-2640.	1.1	6
89	On the Development of Transverse Ridges on Rock Glaciers. Journal of Glaciology, 1989, 35, 383-391.	2.2	6
90	Monte Carlo study of multiple scattering of waves in two-dimensional random media. Journal of the Acoustical Society of America, 1993, 94, 506-513.	1.1	5

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91	Localization, Scaling, and Diffuse Transport of Wave Energy in Disordered Media. Applied Mechanics Reviews, 1996, 49, 126-135.	10.1	5
92	Transport in multi-coupled Anderson localizing systems. Chaos, Solitons and Fractals, 2000, 11, 1611-1620.	5.1	5
93	Fluctuations in the cross-correlation for fields lacking full diffusivity: The statistics of spurious features. Journal of the Acoustical Society of America, 2016, 140, 702-713.	1.1	5
94	Diffuse waves on submerged thin shells. Journal of the Acoustical Society of America, 1994, 95, 857-865.	1.1	4
95	TOWARDS GREEN'S FUNCTION RETRIEVAL FROM IMPERFECTLY PARTITIONED AMBIENT WAVE FIELDS: TRAVEL TIMES, ATTENUATIONS, SPECIFIC INTENSITIES, AND SCATTERING STRENGTHS. , 2011, , 183-194.		4
96	Monte Carlo studies of multiple scattering of waves in one-dimensional random media. Journal of the Acoustical Society of America, 1990, 87, 487-494.	1.1	3
97	Leaky Rayleigh wave scattering from elastic media with random microstructures. Journal of the Acoustical Society of America, 1996, 99, 88-99.	1.1	3
98	Coupling and attenuation of waves in plates by randomly distributed attached impedances. Journal of the Acoustical Society of America, 1996, 99, 2167-2175.	1.1	3
99	A Novel Technique for Mixed-mode Thin Film Adhesion Measurement. Materials Research Society Symposia Proceedings, 2002, 750, 1.	0.1	3
100	Towards a diffusion model of acoustic energy flow in large undamped structures. Journal of Sound and Vibration, 2005, 288, 729-749.	3.9	3
101	Wave diffusion and mesoscopic dynamics, towards a universal time-dependent random scattering matrix. New Journal of Physics, 2007, 9, 8-8.	2.9	3
102	Retrieval of Green's function in the radiative transfer regime. Journal of the Acoustical Society of America, 2013, 133, 792-798.	1.1	3
103	Diffuse elastic waves in a nearly axisymmetric body: Energy distribution, transport and dynamical localization. European Physical Journal: Special Topics, 2017, 226, 1371-1408.	2.6	3
104	Energy spectrum evolution of a diffuse field in an elastic body caused by weak nonlinearity. Physical Review E, 2004, 69, 066605.	2.1	2
105	Toward a theory of wave energy transport in large irregular structures. Journal of the Acoustical Society of America, 2005, 118, 222-231.	1.1	2
106	Amplitude and decay of long-period coda of great earthquakes. Physics of the Earth and Planetary Interiors, 2020, 306, 106538.	1.9	2
107	Retrieval of amplitude and attenuation from ambient seismic noise: synthetic data and practical considerations. Geophysical Journal International, 2020, 222, 544-559.	2.4	2
108	Comments on "Elastic wave invariants for acoustic emission" [J. Acoust. Soc. Am. 70, 110-115 (1981)]. Journal of the Acoustical Society of America, 1982, 72, 1314-1315.	1.1	1

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109	Scattering from a thin random fluid layer. Journal of the Acoustical Society of America, 1994, 96, 1899-1909.	1.1	1
110	Spectral statistics in damped systems. Part II. Spectral density fluctuations. Journal of the Acoustical Society of America, 1996, 100, 327-334.	1.1	1
111	Temperature dependence of ultrasonic velocity using diffuse fields; implications for measurement of stress. AIP Conference Proceedings, 2001, , .	0.4	1
112	Unitarization of the classical statisticalsmatrix for systems with localization. Physical Review E, 2007, 76, 051122.	2.1	1
113	Diffuse energy transport and coda-wave interferometry for resonant transmission between reverberant structures. Journal of the Acoustical Society of America, 2021, 150, 830-840.	1.1	1
114	Single Scattering and Diffusive Limits of the Ultrasonic Radiative Transfer Equation. , 1995, , 75-82.		1
115	Scattering and Multiple Scattering in Disordered Materials, an Overview. Materials Research Society Symposia Proceedings, 1991, 253, 419.	0.1	0
116	Classical Appucations of Multiple Scattering Theory, an Overview. Materials Research Society Symposia Proceedings, 1991, 253, 99.	0.1	0
117	Multiply Scattered and Diffusing Ultrasound: Applications, Experiments, Theory. Materials Research Society Symposia Proceedings, 1991, 253, 141.	0.1	0
118	Surface Wave Generation by Buried Forces in a Half Space. Journal of Mechanics, 2000, 16, 73-78.	1.4	0
119	Wave-vector resonance in a nonlinear multiwavespeed chaotic billiard. Physical Review E, 2006, 73, 025202.	2.1	0
120	4. Green's Function Reconstruction. , 2008, , 99-329.		0
121	3. Highlights of Seismic Interferometry until 2003. , 2008, , 43-98.		0
122	Mesoscopics in Acoustics. , 0, , 123-130.		0
123	Comment on "Relative variance of the mean squared pressure in multimode media: Rehabilitating former approaches". J. Acoust. Soc. Am. 136, 2621-2629 (2014)]. Journal of the Acoustical Society of America, 2015, 137, 1598-1601.	1.1	0
124	Effect of dispersion on the convergence rate for Green's function retrieval. Journal of the Acoustical Society of America, 2016, 140, 4496-4505.	1.1	0