David R Dowling

List of Publications by Year
in descending order

67	2,434	186265 28	206112 48
papers	citations	h-index	g-index

71	71	71	1093
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Phase conjugation in underwater acoustics. Journal of the Acoustical Society of America, 1991, 89, 171-181.	1.1	299
2	Similarity of the concentration field of gas-phase turbulent jets. Journal of Fluid Mechanics, 1990, 218, 109.	3.4	235
3	Bubble-induced skin-friction drag reduction and the abrupt transition to air-layer drag reduction. Journal of Fluid Mechanics, 2008, 612, 201-236.	3.4	180
4	Bubble friction drag reduction in a high-Reynolds-number flat-plate turbulent boundary layer. Journal of Fluid Mechanics, 2006, 552, 353.	3.4	178
5	Acoustic pulse compression using passive phaseâ€conjugate processing. Journal of the Acoustical Society of America, 1994, 95, 1450-1458.	1.1	146
6	Narrowâ€band performance of phaseâ€conjugate arrays in dynamic random media. Journal of the Acoustical Society of America, 1992, 91, 3257-3277.	1.1	91
7	On the scaling of air layer drag reduction. Journal of Fluid Mechanics, 2013, 717, 484-513.	3.4	77
8	Bubble-size distributions produced by wall injection of air into flowing freshwater, saltwater and surfactant solutions. Experiments in Fluids, 2004, 37, 802-810.	2.4	59
9	Using cross correlations of turbulent flow-induced ambient vibrations to estimate the structural impulse response. Application to structural health monitoring. Journal of the Acoustical Society of America, 2007, 121, 1987-1995.	1.1	57
10	On the scaling of air entrainment from a ventilated partial cavity. Journal of Fluid Mechanics, 2013, 732, 47-76.	3.4	54
11	Blind deconvolution for robust signal estimation and approximate source localization. Journal of the Acoustical Society of America, 2012, 131, 2599-2610.	1.1	51
12	High frequency source localization in a shallow ocean sound channel using frequency difference matched field processing. Journal of the Acoustical Society of America, 2015, 138, 3549-3562.	1.1	50
13	Ray-based blind deconvolution in ocean sound channels. Journal of the Acoustical Society of America, 2010, 127, EL42-EL47.	1.1	49
14	Broadband sparse-array blind deconvolution using frequency-difference beamforming. Journal of the Acoustical Society of America, 2012, 132, 3018-3029.	1.1	47
15	Blind deconvolution in ocean waveguides using artificial time reversal. Journal of the Acoustical Society of America, 2004, 116, 262-271.	1.1	44
16	Freeman Scholar Review: Passive and Active Skin-Friction Drag Reduction in Turbulent Boundary Layers. Journal of Fluids Engineering, Transactions of the ASME, 2016, 138, .	1.5	44
17	Modification of the mean near-wall velocity profile of a high-Reynolds number turbulent boundary layer with the injection of drag-reducing polymer solutions. Physics of Fluids, 2013, 25, .	4.0	43
18	Flow-induced degradation of drag-reducing polymer solutions within a high-Reynolds-number turbulent boundary layer. Journal of Fluid Mechanics, 2011, 670, 337-364.	3.4	39

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19	Phaseâ€conjugate array focusing in a moving medium. Journal of the Acoustical Society of America, 1993, 94, 1716-1718.	1.1	38
20	Vortex shedding from a hydrofoil at high Reynolds number. Journal of Fluid Mechanics, 2005, 531, 293-324.	3.4	38
21	Acoustic Remote Sensing. Annual Review of Fluid Mechanics, 2015, 47, 221-243.	25.0	36
22	High Reynolds number experimentation in the US Navy's William B Morgan Large Cavitation Channel. Measurement Science and Technology, 2005, 16, 1701-1709.	2.6	35
23	Experimental assessment of fractal scale similarity in turbulent flows. Part 3. Multifractal scaling. Journal of Fluid Mechanics, 1997, 338, 127-155.	3.4	33
24	Adaptive frequency-difference matched field processing for high frequency source localization in a noisy shallow ocean. Journal of the Acoustical Society of America, 2017, 141, 543-556.	1.1	33
25	The estimated scalar dissipation rate in gasâ€phase turbulent jets. Physics of Fluids A, Fluid Dynamics, 1991, 3, 2229-2246.	1.6	31
26	The mean velocity profile of a smooth-flat-plate turbulent boundary layer at high Reynolds number. Journal of Fluid Mechanics, 2010, 665, 357-381.	3.4	31
27	Time-averaged flow over a hydrofoil at high Reynolds number. Journal of Fluid Mechanics, 2003, 496, 365-404.	3.4	29
28	Turbulence profiles from a smooth flat-plate turbulent boundary layer at high Reynolds number. Experimental Thermal and Fluid Science, 2012, 40, 140-149.	2.7	28
29	Performance comparisons of frequency-difference and conventional beamforming. Journal of the Acoustical Society of America, 2017, 142, 1663-1673.	1.1	27
30	The frequency-difference and frequency-sum acoustic-field autoproducts. Journal of the Acoustical Society of America, 2017, 141, 4579-4590.	1.1	25
31	Ranging bowhead whale calls in a shallow-water dispersive waveguide. Journal of the Acoustical Society of America, 2014, 136, 130-144.	1.1	23
32	Coherence of acoustic scattering from a dynamic rough surface. Journal of the Acoustical Society of America, 1993, 93, 3149-3157.	1.1	21
33	Long-range frequency-difference source localization in the Philippine Sea. Journal of the Acoustical Society of America, 2019, 146, 4727-4739.	1.1	21
34	Computed narrow-band time-reversing array retrofocusing in a dynamic shallow ocean. Journal of the Acoustical Society of America, 2000, 107, 3101-3112.	1.1	20
35	Time-reversing array retrofocusing in noisy environments. Journal of the Acoustical Society of America, 2001, 109, 538-546.	1.1	15
36	Photoacoustic detection and localization of small gas leaks. Journal of the Acoustical Society of America, 1999, 105, 2685-2694.	1.1	14

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37	Broadband time-reversing array retrofocusing in noisy environments. Journal of the Acoustical Society of America, 2002, 111, 823-830.	1.1	14
38	Numerical simulation of free surface flows with the level set method using an extremely high-order accuracy WENO advection scheme. International Journal of Computational Fluid Dynamics, 2009, 23, 233-243.	1.2	14
39	Measurement of autoproduct fields in a Lloyd's mirror environment. Journal of the Acoustical Society of America, 2018, 143, 2419-2427.	1.1	14
40	Time-reversing array retrofocusing in simple dynamic underwater environments. Journal of the Acoustical Society of America, 1998, 104, 3339-3350.	1.1	13
41	Frequency-difference beamforming in the presence of strong random scattering. Journal of the Acoustical Society of America, 2019, 146, 122-134.	1.1	13
42	Broadband performance of a time reversing array with a moving source. Journal of the Acoustical Society of America, 2004, 115, 2807-2817.	1.1	12
43	High-Reynolds-number turbulent-boundary-layer wall-pressure fluctuations with dilute polymer solutions. Physics of Fluids, 2010, 22, 085104.	4.0	10
44	Experimental assessment of fractal scale similarity in turbulent flows. Part 4. Effects of Reynolds and Schmidt numbers. Journal of Fluid Mechanics, 1998, 377, 169-187.	3.4	9
45	Broadband performance of a moving time reversing array. Journal of the Acoustical Society of America, 2003, 114, 1395-1405.	1.1	9
46	Simulations and measurements of inâ€•mold melt flow during the injection molding of polystyrene. Polymer Engineering and Science, 2013, 53, 770-779.	3.1	9
47	Linear and nonlinear gravity-capillary water waves with a soluble surfactant. Experiments in Fluids, 2001, 30, 448-457.	2.4	8
48	Robust long-range source localization in the deep ocean using phase-only matched autoproduct processing. Journal of the Acoustical Society of America, 2021, 150, 171-182.	1.1	7
49	Effect of ocean currents on the performance of a time-reversing array in shallow water. Journal of the Acoustical Society of America, 2003, 114, 3125-3135.	1.1	6
50	High-Reynolds-number turbulent-boundary-layer wall pressure fluctuations with skin-friction reduction by air injection. Journal of the Acoustical Society of America, 2008, 123, 2522-2530.	1.1	6
51	Computed narrow-band azimuthal time-reversing array retrofocusing in shallow water. Journal of the Acoustical Society of America, 2001, 110, 1931-1942.	1.1	5
52	Effects of time-reversing array deformation in an ocean wave guide. Journal of the Acoustical Society of America, 2004, 115, 2844-2847.	1.1	5
53	The effects of refraction and caustics on autoproducts. Journal of the Acoustical Society of America, 2020, 147, 3959-3968.	1.1	5
54	Measurements of the correlation of the frequency-difference autoproduct with acoustic and predicted-autoproduct fields in the deep ocean. Journal of the Acoustical Society of America, 2021, 149, 853-865.	1.1	5

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55	Revealing hidden information with quadratic products of acoustic field amplitudes. Physical Review Fluids, 2018, 3, .	2.5	5
56	Autoproducts in and near acoustic shadow zones created by barriers. Journal of the Acoustical Society of America, 2020, 147, 1863-1873.	1.1	4
57	Simulating acoustic coherent backscattering enhancement from random aggregations of omnidirectional scatterers. Journal of the Acoustical Society of America, 2015, 138, 758-768.	1.1	3
58	Effect of bevel angle on the reflection coefficient from open unflanged pipes. Journal of the Acoustical Society of America, 2018, 144, 1212-1215.	1.1	3
59	Acoustic precondensation phenomena in freons. Journal of the Acoustical Society of America, 1995, 97, 1014-1018.	1.1	2
60	Particle image velocimetry in molten plastic. Polymer Engineering and Science, 2011, 51, 730-745.	3.1	2
61	Remote acoustic detection of mechanical changes in a vibrating plate in an unknown reverberant environment. Journal of the Acoustical Society of America, 2018, 143, 1093-1101.	1.1	2
62	High-resolution acoustic localization of changes in spatially-distributed coherent sources for structural health monitoring. Journal of the Acoustical Society of America, 2020, 148, 713-723.	1.1	2
63	Recovery of coherent reflection from rough-surface scattered acoustic fields via the frequency-difference autoproduct. Journal of the Acoustical Society of America, 2022, 151, 620-633.	1.1	2
64	Comparisons of exact and approximate convection of plane waves in a simple shear flow. Journal of the Acoustical Society of America, 1997, 102, 3378-3386.	1.1	1
65	Far-field coherent backscatter enhancement from random aggregations of scatterers and comparisons to backscattering from single isolated spheres. Journal of the Acoustical Society of America, 2017, 141, 1214-1225.	1.1	1
66	Remote acoustic detection of cuts in a vibrating plate with stochastic input forcing in a reverberant environment. Journal of the Acoustical Society of America, 2019, 145, 3039-3047.	1.1	0
67	Information and suggestions for new mentors of beginning researchers. Proceedings of Meetings on Acoustics, 2019, , .	0.3	0