

David R Dowling

List of Publications by Year in descending order

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67
papers

2,434
citations

186265

28
h-index

206112

48
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71
all docs

71
docs citations

71
times ranked

1093
citing authors

#	ARTICLE	IF	CITATIONS
1	Recovery of coherent reflection from rough-surface scattered acoustic fields via the frequency-difference autoprodut. Journal of the Acoustical Society of America, 2022, 151, 620-633.	1.1	2
2	Measurements of the correlation of the frequency-difference autoprodut with acoustic and predicted-autoprodut fields in the deep ocean. Journal of the Acoustical Society of America, 2021, 149, 853-865.	1.1	5
3	Robust long-range source localization in the deep ocean using phase-only matched autoprodut processing. Journal of the Acoustical Society of America, 2021, 150, 171-182.	1.1	7
4	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
5	Autoproducts in and near acoustic shadow zones created by barriers. Journal of the Acoustical Society of America, 2020, 147, 1863-1873.	1.1	4
6	The effects of refraction and caustics on autoproduts. Journal of the Acoustical Society of America, 2020, 147, 3959-3968.	1.1	5
7	Frequency-difference beamforming in the presence of strong random scattering. Journal of the Acoustical Society of America, 2019, 146, 122-134.	1.1	13
8	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
9	Long-range frequency-difference source localization in the Philippine Sea. Journal of the Acoustical Society of America, 2019, 146, 4727-4739.	1.1	21
10	Information and suggestions for new mentors of beginning researchers. Proceedings of Meetings on Acoustics, 2019, , .	0.3	0
11	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
12	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
13	Measurement of autoprodut fields in a Lloyd's mirror environment. Journal of the Acoustical Society of America, 2018, 143, 2419-2427.	1.1	14
14	Revealing hidden information with quadratic products of acoustic field amplitudes. Physical Review Fluids, 2018, 3, .	2.5	5
15	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
16	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
17	Performance comparisons of frequency-difference and conventional beamforming. Journal of the Acoustical Society of America, 2017, 142, 1663-1673.	1.1	27
18	The frequency-difference and frequency-sum acoustic-field autoproduts. Journal of the Acoustical Society of America, 2017, 141, 4579-4590.	1.1	25

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19	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
20	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
21	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
22	Acoustic Remote Sensing. Annual Review of Fluid Mechanics, 2015, 47, 221-243.	25.0	36
23	Ranging bowhead whale calls in a shallow-water dispersive waveguide. Journal of the Acoustical Society of America, 2014, 136, 130-144.	1.1	23
24	On the scaling of air entrainment from a ventilated partial cavity. Journal of Fluid Mechanics, 2013, 732, 47-76.	3.4	54
25	On the scaling of air layer drag reduction. Journal of Fluid Mechanics, 2013, 717, 484-513.	3.4	77
26	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
27	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
28	Broadband sparse-array blind deconvolution using frequency-difference beamforming. Journal of the Acoustical Society of America, 2012, 132, 3018-3029.	1.1	47
29	Blind deconvolution for robust signal estimation and approximate source localization. Journal of the Acoustical Society of America, 2012, 131, 2599-2610.	1.1	51
30	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
31	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
32	Particle image velocimetry in molten plastic. Polymer Engineering and Science, 2011, 51, 730-745.	3.1	2
33	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
34	Ray-based blind deconvolution in ocean sound channels. Journal of the Acoustical Society of America, 2010, 127, EL42-EL47.	1.1	49
35	High-Reynolds-number turbulent-boundary-layer wall-pressure fluctuations with dilute polymer solutions. Physics of Fluids, 2010, 22, 085104.	4.0	10
36	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

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37	High-Reynolds-number turbulent-boundary-layer wall pressure fluctuations with skin-friction reduction by air injection. <i>Journal of the Acoustical Society of America</i> , 2008, 123, 2522-2530.	1.1	6
38	Bubble-induced skin-friction drag reduction and the abrupt transition to air-layer drag reduction. <i>Journal of Fluid Mechanics</i> , 2008, 612, 201-236.	3.4	180
39	Using cross correlations of turbulent flow-induced ambient vibrations to estimate the structural impulse response. Application to structural health monitoring. <i>Journal of the Acoustical Society of America</i> , 2007, 121, 1987-1995.	1.1	57
40	Bubble friction drag reduction in a high-Reynolds-number flat-plate turbulent boundary layer. <i>Journal of Fluid Mechanics</i> , 2006, 552, 353.	3.4	178
41	High Reynolds number experimentation in the US Navy's William B Morgan Large Cavitation Channel. <i>Measurement Science and Technology</i> , 2005, 16, 1701-1709.	2.6	35
42	Vortex shedding from a hydrofoil at high Reynolds number. <i>Journal of Fluid Mechanics</i> , 2005, 531, 293-324.	3.4	38
43	Effects of time-reversing array deformation in an ocean wave guide. <i>Journal of the Acoustical Society of America</i> , 2004, 115, 2844-2847.	1.1	5
44	Broadband performance of a time reversing array with a moving source. <i>Journal of the Acoustical Society of America</i> , 2004, 115, 2807-2817.	1.1	12
45	Blind deconvolution in ocean waveguides using artificial time reversal. <i>Journal of the Acoustical Society of America</i> , 2004, 116, 262-271.	1.1	44
46	Bubble-size distributions produced by wall injection of air into flowing freshwater, saltwater and surfactant solutions. <i>Experiments in Fluids</i> , 2004, 37, 802-810.	2.4	59
47	Time-averaged flow over a hydrofoil at high Reynolds number. <i>Journal of Fluid Mechanics</i> , 2003, 496, 365-404.	3.4	29
48	Effect of ocean currents on the performance of a time-reversing array in shallow water. <i>Journal of the Acoustical Society of America</i> , 2003, 114, 3125-3135.	1.1	6
49	Broadband performance of a moving time reversing array. <i>Journal of the Acoustical Society of America</i> , 2003, 114, 1395-1405.	1.1	9
50	Broadband time-reversing array retrofocusing in noisy environments. <i>Journal of the Acoustical Society of America</i> , 2002, 111, 823-830.	1.1	14
51	Computed narrow-band azimuthal time-reversing array retrofocusing in shallow water. <i>Journal of the Acoustical Society of America</i> , 2001, 110, 1931-1942.	1.1	5
52	Linear and nonlinear gravity-capillary water waves with a soluble surfactant. <i>Experiments in Fluids</i> , 2001, 30, 448-457.	2.4	8
53	Time-reversing array retrofocusing in noisy environments. <i>Journal of the Acoustical Society of America</i> , 2001, 109, 538-546.	1.1	15
54	Computed narrow-band time-reversing array retrofocusing in a dynamic shallow ocean. <i>Journal of the Acoustical Society of America</i> , 2000, 107, 3101-3112.	1.1	20

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55	Photoacoustic detection and localization of small gas leaks. Journal of the Acoustical Society of America, 1999, 105, 2685-2694.	1.1	14
56	Time-reversing array retrofocusing in simple dynamic underwater environments. Journal of the Acoustical Society of America, 1998, 104, 3339-3350.	1.1	13
57	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
58	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
59	Experimental assessment of fractal scale similarity in turbulent flows. Part 3. Multifractal scaling. Journal of Fluid Mechanics, 1997, 338, 127-155.	3.4	33
60	Acoustic precondensation phenomena in freons. Journal of the Acoustical Society of America, 1995, 97, 1014-1018.	1.1	2
61	Acoustic pulse compression using passive phase-conjugate processing. Journal of the Acoustical Society of America, 1994, 95, 1450-1458.	1.1	146
62	Coherence of acoustic scattering from a dynamic rough surface. Journal of the Acoustical Society of America, 1993, 93, 3149-3157.	1.1	21
63	Phase-conjugate array focusing in a moving medium. Journal of the Acoustical Society of America, 1993, 94, 1716-1718.	1.1	38
64	Narrow-band performance of phase-conjugate arrays in dynamic random media. Journal of the Acoustical Society of America, 1992, 91, 3257-3277.	1.1	91
65	Phase conjugation in underwater acoustics. Journal of the Acoustical Society of America, 1991, 89, 171-181.	1.1	299
66	The estimated scalar dissipation rate in gas-phase turbulent jets. Physics of Fluids A, Fluid Dynamics, 1991, 3, 2229-2246.	1.6	31
67	Similarity of the concentration field of gas-phase turbulent jets. Journal of Fluid Mechanics, 1990, 218, 109.	3.4	235