

Stuart B Dalziel

List of Publications by Year in descending order

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99
papers

3,729
citations

159358

30
h-index

138251

58
g-index

104
all docs

104
docs citations

104
times ranked

2261
citing authors

#	ARTICLE	IF	CITATIONS
1	Gravity currents produced by lock exchange. <i>Journal of Fluid Mechanics</i> , 2004, 521, 1-34.	1.4	337
2	Whole-field density measurements by 'synthetic schlieren'. <i>Experiments in Fluids</i> , 2000, 28, 322-335.	1.1	291
3	Effects of ventilation on the indoor spread of COVID-19. <i>Journal of Fluid Mechanics</i> , 2020, 903, F1.	1.4	283
4	Self-similarity and internal structure of turbulence induced by Rayleigh-Taylor instability. <i>Journal of Fluid Mechanics</i> , 1999, 399, 1-48.	1.4	210
5	Visualization and measurement of internal waves by "synthetic schlieren"™. Part 1. Vertically oscillating cylinder. <i>Journal of Fluid Mechanics</i> , 1999, 390, 93-126.	1.4	155
6	Mixing in lock-release gravity currents. <i>Dynamics of Atmospheres and Oceans</i> , 1996, 24, 183-195.	0.7	147
7	Structure formation in homogeneous freely decaying rotating turbulence. <i>Journal of Fluid Mechanics</i> , 2008, 598, 81-105.	1.4	105
8	Rayleigh-Taylor instability: experiments with image analysis. <i>Dynamics of Atmospheres and Oceans</i> , 1993, 20, 127-153.	0.7	103
9	Two-layer hydraulics: a functional approach. <i>Journal of Fluid Mechanics</i> , 1991, 223, 135.	1.4	100
10	On the evolution of eddies in a rapidly rotating system. <i>Journal of Fluid Mechanics</i> , 2006, 557, 135.	1.4	94
11	Decay of rotating turbulence: some particle tracking experiments. <i>Flow, Turbulence and Combustion</i> , 1992, 49, 217-244.	0.2	80
12	Dust resuspension by the flow around an impacting sphere. <i>Journal of Fluid Mechanics</i> , 2000, 403, 305-328.	1.4	68
13	Simultaneous synthetic schlieren and PIV measurements for internal solitary waves. <i>Measurement Science and Technology</i> , 2007, 18, 533-547.	1.4	68
14	Time-dependent plumes and jets with decreasing source strengths. <i>Journal of Fluid Mechanics</i> , 2006, 563, 443.	1.4	59
15	Mixing efficiency in high-aspect-ratio Rayleigh-Taylor experiments. <i>Physics of Fluids</i> , 2008, 20, .	1.6	59
16	Efficient mixing in stratified flows: experimental study of a Rayleigh-Taylor unstable interface within an otherwise stable stratification. <i>Journal of Fluid Mechanics</i> , 2014, 756, 1027-1057.	1.4	55
17	Observations on the wavenumber spectrum and evolution of an internal wave attractor. <i>Journal of Fluid Mechanics</i> , 2008, 598, 373-382.	1.4	53
18	A study of three-dimensional gravity currents on a uniform slope. <i>Journal of Fluid Mechanics</i> , 2002, 453, 239-261.	1.4	50

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19	Sediment resuspension and erosion by vortex rings. <i>Physics of Fluids</i> , 2009, 21, .	1.6	50
20	Small Atwood number Rayleigh-Taylor experiments. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2010, 368, 1663-1679.	1.6	48
21	Bubble size distribution in dissolved air flotation tanks. <i>Journal of Water Supply: Research and Technology - AQUA</i> , 2004, 53, 531-543.	0.6	45
22	Vortical motion in the head of an axisymmetric gravity current. <i>Physics of Fluids</i> , 2006, 18, 046601.	1.6	42
23	The hydraulics of doorway exchange flows. <i>Building and Environment</i> , 1991, 26, 121-135.	3.0	41
24	Rayleigh-Taylor mixing in an otherwise stable stratification. <i>Journal of Fluid Mechanics</i> , 2011, 688, 507-527.	1.4	38
25	The structure of the head of an inertial gravity current determined by particle-tracking velocimetry. <i>Experiments in Fluids</i> , 2003, 34, 708-716.	1.1	37
26	The synthesis of di-carboxylate esters using continuous flow vortex fluidics. <i>Green Chemistry</i> , 2016, 18, 2193-2200.	4.6	37
27	Rayleigh-Taylor instability in complex stratifications. <i>Journal of Fluid Mechanics</i> , 2005, 542, 251.	1.4	36
28	The structure and origin of confined Holmboe waves. <i>Journal of Fluid Mechanics</i> , 2018, 848, 508-544.	1.4	36
29	Saline and particle-driven interfacial intrusions. <i>Journal of Fluid Mechanics</i> , 1999, 389, 303-334.	1.4	35
30	Source-sink turbulence in a rotating stratified fluid. <i>Journal of Fluid Mechanics</i> , 1995, 298, 81-112.	1.4	30
31	Maximal Exchange in Channels with Nonrectangular Cross Sections. <i>Journal of Physical Oceanography</i> , 1992, 22, 1188-1206.	0.7	29
32	Fluid displacement by Stokes flow past a spherical droplet. <i>Journal of Fluid Mechanics</i> , 2003, 485, 67-85.	1.4	27
33	Time-dependent mixing in stratified Kelvin-Helmholtz billows: Experimental observations. <i>Geophysical Research Letters</i> , 2006, 33, .	1.5	27
34	Continuous flow Fischer esterifications harnessing vibrational-coupled thin film fluidics. <i>RSC Advances</i> , 2015, 5, 1655-1660.	1.7	26
35	Internal wave fields generated by a translating body in a stratified fluid: an experimental comparison. <i>Journal of Fluid Mechanics</i> , 2006, 564, 305.	1.4	25
36	Turbulent diffusion in tall tubes. I. Models for Rayleigh-Taylor instability. <i>Physics of Fluids</i> , 2011, 23, 085109.	1.6	25

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37	On the meaning of mixing efficiency for buoyancy-driven mixing in stratified turbulent flows. <i>Journal of Fluid Mechanics</i> , 2015, 781, 261-275.	1.4	25
38	Internal waves revisited. <i>Dynamics of Atmospheres and Oceans</i> , 2000, 31, 209-232.	0.7	23
39	Internal wave fields and drag generated by a translating body in a stratified fluid. <i>Journal of Fluid Mechanics</i> , 2004, 498, 289-313.	1.4	23
40	Tomographic reconstruction of internal wave patterns in a paraboloid. <i>Experiments in Fluids</i> , 2011, 50, 247-258.	1.1	23
41	Electrical measurement of sediment layer thickness under suspension flows. <i>Experiments in Fluids</i> , 1999, 26, 470-474.	1.1	22
42	Axisymmetric gravity currents on a cone. <i>Journal of Fluid Mechanics</i> , 2006, 565, 227.	1.4	22
43	Boussinesq plumes and jets with decreasing source strengths in stratified environments. <i>Journal of Fluid Mechanics</i> , 2006, 563, 463.	1.4	22
44	Attenuation technique for measuring sediment displacement levels. <i>Experiments in Fluids</i> , 2005, 39, 602-613.	1.1	21
45	Comparison of laboratory and numerically observed scalar fields of an internal wave attractor. <i>European Journal of Mechanics, B/Fluids</i> , 2011, 30, 51-56.	1.2	21
46	Measurements of layer depth during baroclinic instability in a two-layer flow. <i>Flow, Turbulence and Combustion</i> , 1996, 56, 191-207.	0.2	20
47	Rayleigh-Taylor instability at a tilted interface in laboratory experiments and numerical simulations. <i>Laser and Particle Beams</i> , 2003, 21, 419-423.	0.4	20
48	A dynamic masking technique for combined measurements of PIV and synthetic schlieren applied to internal gravity waves. <i>Measurement Science and Technology</i> , 2005, 16, 1954-1960.	1.4	20
49	Observations on the robustness of internal wave attractors to perturbations. <i>Physics of Fluids</i> , 2010, 22, .	1.6	20
50	Source-sink turbulence in a stratified fluid. <i>Journal of Fluid Mechanics</i> , 1994, 261, 273-303.	1.4	19
51	Resuspension onset and crater erosion by a vortex ring interacting with a particle layer. <i>Physics of Fluids</i> , 2012, 24, .	1.6	18
52	Three-dimensional visualization of the interaction of a vortex ring with a stratified interface. <i>Journal of Fluid Mechanics</i> , 2017, 820, 549-579.	1.4	18
53	Metal-silicate mixing by large Earth-forming impacts. <i>Earth and Planetary Science Letters</i> , 2021, 564, 116888.	1.8	18
54	The evolution of a stratified turbulent cloud. <i>Journal of Fluid Mechanics</i> , 2014, 739, 229-253.	1.4	17

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55	Particle image velocimetry and modelling of horizontal coherent liquid jets impinging on and draining down a vertical wall. <i>Experimental Thermal and Fluid Science</i> , 2016, 74, 429-443.	1.5	17
56	A versatile scanning method for volumetric measurements of velocity and density fields. <i>Measurement Science and Technology</i> , 2019, 30, 055203.	1.4	17
57	A light attenuation technique for void fraction measurement of microbubbles. <i>Experiments in Fluids</i> , 2001, 30, 214-220.	1.1	16
58	Temporal variation of non-ideal plumes with sudden reductions in buoyancy flux. <i>Journal of Fluid Mechanics</i> , 2008, 600, 181-199.	1.4	15
59	Inclined gravity currents filling basins: the impact of peeling detrainment on transport and vertical structure. <i>Journal of Fluid Mechanics</i> , 2017, 820, 400-423.	1.4	15
60	The drag on a vertically moving grid of bars in a linearly stratified fluid. <i>Experiments in Fluids</i> , 2003, 34, 678-686.	1.1	14
61	Turbulent diffusion in tall tubes. II. Confinement by stratification. <i>Physics of Fluids</i> , 2011, 23, 085110.	1.6	13
62	Bedload transport by a vertical jet impinging upon sediments. <i>Physics of Fluids</i> , 2014, 26, .	1.6	13
63	Vortex-ring-induced stratified mixing. <i>Journal of Fluid Mechanics</i> , 2015, 781, 113-126.	1.4	13
64	Numerical modelling of two-dimensional and axisymmetric gravity currents. <i>International Journal for Numerical Methods in Fluids</i> , 2005, 47, 1221-1227.	0.9	12
65	Anticyclonic precession of a plume in a rotating environment. <i>Geophysical Research Letters</i> , 2017, 44, 9400-9407.	1.5	12
66	Air Flow Experiments on a Train Carriage – Towards Understanding the Risk of Airborne Transmission. <i>Atmosphere</i> , 2021, 12, 1267.	1.0	12
67	A pattern matching technique for measuring sediment displacement levels. <i>Experiments in Fluids</i> , 2004, 37, 399-408.	1.1	11
68	Local implications for self-similar turbulent plume models. <i>Journal of Fluid Mechanics</i> , 2007, 575, 257-265.	1.4	11
69	The structure of low-Froude-number lee waves over an isolated obstacle. <i>Journal of Fluid Mechanics</i> , 2011, 689, 3-31.	1.4	11
70	Neutron imaging and modelling inclined vortex driven thin films. <i>Scientific Reports</i> , 2019, 9, 2817.	1.6	11
71	Experimental investigations of quasi-two-dimensional vortices in a stratified fluid with source sink forcing. <i>Journal of Fluid Mechanics</i> , 1999, 383, 249-283.	1.4	10
72	An experimental study of the bulk properties of vortex rings translating through a stratified fluid. <i>European Journal of Mechanics, B/Fluids</i> , 2006, 25, 302-320.	1.2	10

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73	Evolution of the Leading-Edge Vortex over an Accelerating Rotating Wing. <i>Procedia IUTAM</i> , 2013, 7, 233-242.	1.2	10
74	Cleaning of viscous drops on a flat inclined surface using gravity-driven film flows. <i>Food and Bioproducts Processing</i> , 2015, 93, 310-317.	1.8	10
75	Vortex rings impinging on permeable boundaries. <i>Physics of Fluids</i> , 2015, 27, .	1.6	10
76	Using stratification to mitigate end effects in quasi-Keplerian Taylor-Couette flow. <i>Journal of Fluid Mechanics</i> , 2016, 791, 608-630.	1.4	10
77	Particle organization after viscous sedimentation in tilted containers. <i>Physics of Fluids</i> , 2016, 28, .	1.6	9
78	Resuspension by saline and particle-driven gravity currents. <i>Journal of Geophysical Research</i> , 2001, 106, 14095-14111.	3.3	8
79	Simultaneous particle image velocimetry and synthetic schlieren measurements of an erupting thermal plume. <i>Measurement Science and Technology</i> , 2009, 20, 125402.	1.4	8
80	Convective mass transfer from a submerged drop in a thin falling film. <i>Journal of Fluid Mechanics</i> , 2016, 789, 630-668.	1.4	8
81	Inclined gravity currents filling basins: The influence of Reynolds number on entrainment into gravity currents. <i>Physics of Fluids</i> , 2015, 27, 096602.	1.6	7
82	The granular Blasius problem. <i>Journal of Fluid Mechanics</i> , 2019, 872, 784-817.	1.4	7
83	Turbulent jets with off-source heating. <i>Journal of Fluid Mechanics</i> , 2017, 824, 766-784.	1.4	6
84	Vortex-ring-induced stratified mixing: mixing model. <i>Journal of Fluid Mechanics</i> , 2018, 837, 129-146.	1.4	6
85	The magic carpet: an arbitrary spectrum wave maker for internal waves. <i>Experiments in Fluids</i> , 2019, 60, 1.	1.1	6
86	Harmonics from a magic carpet. <i>Journal of Fluid Mechanics</i> , 2021, 911, .	1.4	6
87	Bursting water balloons. <i>Journal of Fluid Mechanics</i> , 2014, 756, 771-815.	1.4	5
88	Experimental evidence of internal wave attractor signatures hidden in large-amplitude multi-frequency wave fields. <i>Journal of Fluid Mechanics</i> , 2021, 915, .	1.4	5
89	Synthetic schlieren: Determination of the density gradient generated by internal waves propagating in a stratified fluid. <i>Journal of Physics: Conference Series</i> , 2009, 166, 012007.	0.3	4
90	The twists and turns of rotating turbulence. <i>Journal of Fluid Mechanics</i> , 2011, 666, 1-4.	1.4	4

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91	Interaction between the Blasius boundary layer and a free surface. Journal of Fluid Mechanics, 2018, 839, .	1.4	4
92	A hierarchical decomposition of internal wave fields. Journal of Fluid Mechanics, 2022, 934, .	1.4	4
93	Experimental studies of rotating exchange flow. Deep-Sea Research Part I: Oceanographic Research Papers, 2007, 54, 269-291.	0.6	3
94	Rayleighâ€“Taylor instability between unequally stratified layers. Physica D: Nonlinear Phenomena, 2021, 423, 132907.	1.3	3
95	Effects of background rotation on the dynamics of multiphase plumes. Journal of Fluid Mechanics, 2021, 915, .	1.4	2
96	Particle resuspension by an impacting vortex ring. , 2003, , 105-108.		2
97	A new nozzle for dissolved air flotation. Water Science and Technology: Water Supply, 2009, 9, 611-617.	1.0	1
98	On the Large Scale Evolution of Rotating Turbulence. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2008, , 391-396.	0.1	0
99	Observations on Rapidly Rotating Turbulence. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2010, , 95-104.	0.1	0