

# Stuart B Dalziel

## List of Publications by Year in descending order

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99  
papers

3,729  
citations

159585

30  
h-index

138484

58  
g-index

104  
all docs

104  
docs citations

104  
times ranked

2261  
citing authors

#	ARTICLE	IF	CITATIONS
1	A hierarchical decomposition of internal wave fields. <i>Journal of Fluid Mechanics</i> , 2022, 934, .	3.4	4
2	Harmonics from a magic carpet. <i>Journal of Fluid Mechanics</i> , 2021, 911, .	3.4	6
3	Experimental evidence of internal wave attractor signatures hidden in large-amplitude multi-frequency wave fields. <i>Journal of Fluid Mechanics</i> , 2021, 915, .	3.4	5
4	Effects of background rotation on the dynamics of multiphase plumes. <i>Journal of Fluid Mechanics</i> , 2021, 915, .	3.4	2
5	Metal-silicate mixing by large Earth-forming impacts. <i>Earth and Planetary Science Letters</i> , 2021, 564, 116888.	4.4	18
6	Rayleigh–Taylor instability between unequally stratified layers. <i>Physica D: Nonlinear Phenomena</i> , 2021, 423, 132907.	2.8	3
7	Air Flow Experiments on a Train Carriage—Towards Understanding the Risk of Airborne Transmission. <i>Atmosphere</i> , 2021, 12, 1267.	2.3	12
8	Effects of ventilation on the indoor spread of COVID-19. <i>Journal of Fluid Mechanics</i> , 2020, 903, F1.	3.4	283
9	The magic carpet: an arbitrary spectrum wave maker for internal waves. <i>Experiments in Fluids</i> , 2019, 60, 1.	2.4	6
10	A versatile scanning method for volumetric measurements of velocity and density fields. <i>Measurement Science and Technology</i> , 2019, 30, 055203.	2.6	17
11	The granular Blasius problem. <i>Journal of Fluid Mechanics</i> , 2019, 872, 784-817.	3.4	7
12	Neutron imaging and modelling inclined vortex driven thin films. <i>Scientific Reports</i> , 2019, 9, 2817.	3.3	11
13	Interaction between the Blasius boundary layer and a free surface. <i>Journal of Fluid Mechanics</i> , 2018, 839, .	3.4	4
14	Vortex-ring-induced stratified mixing: mixing model. <i>Journal of Fluid Mechanics</i> , 2018, 837, 129-146.	3.4	6
15	The structure and origin of confined Holmboe waves. <i>Journal of Fluid Mechanics</i> , 2018, 848, 508-544.	3.4	36
16	Three-dimensional visualization of the interaction of a vortex ring with a stratified interface. <i>Journal of Fluid Mechanics</i> , 2017, 820, 549-579.	3.4	18
17	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.	3.4	15
18	Anticyclonic precession of a plume in a rotating environment. <i>Geophysical Research Letters</i> , 2017, 44, 9400-9407.	4.0	12

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19	Turbulent jets with off-source heating. <i>Journal of Fluid Mechanics</i> , 2017, 824, 766-784.	3.4	6
20	Particle organization after viscous sedimentation in tilted containers. <i>Physics of Fluids</i> , 2016, 28, .	4.0	9
21	Convective mass transfer from a submerged drop in a thin falling film. <i>Journal of Fluid Mechanics</i> , 2016, 789, 630-668.	3.4	8
22	Using stratification to mitigate end effects in quasi-Keplerian Taylor-Couette flow. <i>Journal of Fluid Mechanics</i> , 2016, 791, 608-630.	3.4	10
23	The synthesis of di-carboxylate esters using continuous flow vortex fluidics. <i>Green Chemistry</i> , 2016, 18, 2193-2200.	9.0	37
24	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.	2.7	17
25	On the meaning of mixing efficiency for buoyancy-driven mixing in stratified turbulent flows. <i>Journal of Fluid Mechanics</i> , 2015, 781, 261-275.	3.4	25
26	Vortex-ring-induced stratified mixing. <i>Journal of Fluid Mechanics</i> , 2015, 781, 113-126.	3.4	13
27	Inclined gravity currents filling basins: The influence of Reynolds number on entrainment into gravity currents. <i>Physics of Fluids</i> , 2015, 27, 096602.	4.0	7
28	Cleaning of viscous drops on a flat inclined surface using gravity-driven film flows. <i>Food and Bioproducts Processing</i> , 2015, 93, 310-317.	3.6	10
29	Vortex rings impinging on permeable boundaries. <i>Physics of Fluids</i> , 2015, 27, .	4.0	10
30	Continuous flow Fischer esterifications harnessing vibrational-coupled thin film fluidics. <i>RSC Advances</i> , 2015, 5, 1655-1660.	3.6	26
31	Bedload transport by a vertical jet impinging upon sediments. <i>Physics of Fluids</i> , 2014, 26, .	4.0	13
32	Bursting water balloons. <i>Journal of Fluid Mechanics</i> , 2014, 756, 771-815.	3.4	5
33	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.	3.4	55
34	The evolution of a stratified turbulent cloud. <i>Journal of Fluid Mechanics</i> , 2014, 739, 229-253.	3.4	17
35	Evolution of the Leading-Edge Vortex over an Accelerating Rotating Wing. <i>Procedia IUTAM</i> , 2013, 7, 233-242.	1.2	10
36	Resuspension onset and crater erosion by a vortex ring interacting with a particle layer. <i>Physics of Fluids</i> , 2012, 24, .	4.0	18

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37	The structure of low-Froude-number lee waves over an isolated obstacle. <i>Journal of Fluid Mechanics</i> , 2011, 689, 3-31.	3.4	11
38	Rayleigh-Taylor mixing in an otherwise stable stratification. <i>Journal of Fluid Mechanics</i> , 2011, 688, 507-527.	3.4	38
39	The twists and turns of rotating turbulence. <i>Journal of Fluid Mechanics</i> , 2011, 666, 1-4.	3.4	4
40	Tomographic reconstruction of internal wave patterns in a paraboloid. <i>Experiments in Fluids</i> , 2011, 50, 247-258.	2.4	23
41	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.	2.5	21
42	Turbulent diffusion in tall tubes. II. Confinement by stratification. <i>Physics of Fluids</i> , 2011, 23, 085110.	4.0	13
43	Turbulent diffusion in tall tubes. I. Models for Rayleigh-Taylor instability. <i>Physics of Fluids</i> , 2011, 23, 085109.	4.0	25
44	Observations on the robustness of internal wave attractors to perturbations. <i>Physics of Fluids</i> , 2010, 22, .	4.0	20
45	Small Atwood number Rayleigh-Taylor experiments. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2010, 368, 1663-1679.	3.4	48
46	Observations on Rapidly Rotating Turbulence. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2010, , 95-104.	0.2	0
47	Simultaneous particle image velocimetry and synthetic schlieren measurements of an erupting thermal plume. <i>Measurement Science and Technology</i> , 2009, 20, 125402.	2.6	8
48	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.	0.4	4
49	Sediment resuspension and erosion by vortex rings. <i>Physics of Fluids</i> , 2009, 21, .	4.0	50
50	A new nozzle for dissolved air flotation. <i>Water Science and Technology: Water Supply</i> , 2009, 9, 611-617.	2.1	1
51	Mixing efficiency in high-aspect-ratio Rayleigh-Taylor experiments. <i>Physics of Fluids</i> , 2008, 20, .	4.0	59
52	Structure formation in homogeneous freely decaying rotating turbulence. <i>Journal of Fluid Mechanics</i> , 2008, 598, 81-105.	3.4	105
53	Observations on the wavenumber spectrum and evolution of an internal wave attractor. <i>Journal of Fluid Mechanics</i> , 2008, 598, 373-382.	3.4	53
54	Temporal variation of non-ideal plumes with sudden reductions in buoyancy flux. <i>Journal of Fluid Mechanics</i> , 2008, 600, 181-199.	3.4	15

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55	On the Large Scale Evolution of Rotating Turbulence. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2008, , 391-396.	0.2	0
56	Simultaneous synthetic schlieren and PIV measurements for internal solitary waves. Measurement Science and Technology, 2007, 18, 533-547.	2.6	68
57	Experimental studies of rotating exchange flow. Deep-Sea Research Part I: Oceanographic Research Papers, 2007, 54, 269-291.	1.4	3
58	Local implications for self-similar turbulent plume models. Journal of Fluid Mechanics, 2007, 575, 257-265.	3.4	11
59	Time-dependent mixing in stratified Kelvin-Helmholtz billows: Experimental observations. Geophysical Research Letters, 2006, 33, .	4.0	27
60	Axisymmetric gravity currents on a cone. Journal of Fluid Mechanics, 2006, 565, 227.	3.4	22
61	Internal wave fields generated by a translating body in a stratified fluid: an experimental comparison. Journal of Fluid Mechanics, 2006, 564, 305.	3.4	25
62	Time-dependent plumes and jets with decreasing source strengths. Journal of Fluid Mechanics, 2006, 563, 443.	3.4	59
63	Boussinesq plumes and jets with decreasing source strengths in stratified environments. Journal of Fluid Mechanics, 2006, 563, 463.	3.4	22
64	On the evolution of eddies in a rapidly rotating system. Journal of Fluid Mechanics, 2006, 557, 135.	3.4	94
65	An experimental study of the bulk properties of vortex rings translating through a stratified fluid. European Journal of Mechanics, B/Fluids, 2006, 25, 302-320.	2.5	10
66	Vortical motion in the head of an axisymmetric gravity current. Physics of Fluids, 2006, 18, 046601.	4.0	42
67	Numerical modelling of two-dimensional and axisymmetric gravity currents. International Journal for Numerical Methods in Fluids, 2005, 47, 1221-1227.	1.6	12
68	Attenuation technique for measuring sediment displacement levels. Experiments in Fluids, 2005, 39, 602-613.	2.4	21
69	A dynamic masking technique for combined measurements of PIV and synthetic schlieren applied to internal gravity waves. Measurement Science and Technology, 2005, 16, 1954-1960.	2.6	20
70	Rayleigh-Taylor instability in complex stratifications. Journal of Fluid Mechanics, 2005, 542, 251.	3.4	36
71	Bubble size distribution in dissolved air flotation tanks. Journal of Water Supply: Research and Technology - AQUA, 2004, 53, 531-543.	1.4	45
72	A pattern matching technique for measuring sediment displacement levels. Experiments in Fluids, 2004, 37, 399-408.	2.4	11

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73	Gravity currents produced by lock exchange. <i>Journal of Fluid Mechanics</i> , 2004, 521, 1-34.	3.4	337
74	Internal wave fields and drag generated by a translating body in a stratified fluid. <i>Journal of Fluid Mechanics</i> , 2004, 498, 289-313.	3.4	23
75	The drag on a vertically moving grid of bars in a linearly stratified fluid. <i>Experiments in Fluids</i> , 2003, 34, 678-686.	2.4	14
76	The structure of the head of an inertial gravity current determined by particle-tracking velocimetry. <i>Experiments in Fluids</i> , 2003, 34, 708-716.	2.4	37
77	Fluid displacement by Stokes flow past a spherical droplet. <i>Journal of Fluid Mechanics</i> , 2003, 485, 67-85.	3.4	27
78	Rayleigh-Taylor instability at a tilted interface in laboratory experiments and numerical simulations. <i>Laser and Particle Beams</i> , 2003, 21, 419-423.	1.0	20
79	Particle resuspension by an impacting vortex ring. , 2003, , 105-108.		2
80	A study of three-dimensional gravity currents on a uniform slope. <i>Journal of Fluid Mechanics</i> , 2002, 453, 239-261.	3.4	50
81	Resuspension by saline and particle-driven gravity currents. <i>Journal of Geophysical Research</i> , 2001, 106, 14095-14111.	3.3	8
82	A light attenuation technique for void fraction measurement of microbubbles. <i>Experiments in Fluids</i> , 2001, 30, 214-220.	2.4	16
83	Whole-field density measurements by 'synthetic schlieren'. <i>Experiments in Fluids</i> , 2000, 28, 322-335.	2.4	291
84	Dust resuspension by the flow around an impacting sphere. <i>Journal of Fluid Mechanics</i> , 2000, 403, 305-328.	3.4	68
85	Internal waves revisited. <i>Dynamics of Atmospheres and Oceans</i> , 2000, 31, 209-232.	1.8	23
86	Self-similarity and internal structure of turbulence induced by Rayleigh-Taylor instability. <i>Journal of Fluid Mechanics</i> , 1999, 399, 1-48.	3.4	210
87	Saline and particle-driven interfacial intrusions. <i>Journal of Fluid Mechanics</i> , 1999, 389, 303-334.	3.4	35
88	Visualization and measurement of internal waves by 'synthetic schlieren'™. Part 1. Vertically oscillating cylinder. <i>Journal of Fluid Mechanics</i> , 1999, 390, 93-126.	3.4	155
89	Electrical measurement of sediment layer thickness under suspension flows. <i>Experiments in Fluids</i> , 1999, 26, 470-474.	2.4	22
90	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.	3.4	10

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91	Mixing in lock-release gravity currents. <i>Dynamics of Atmospheres and Oceans</i> , 1996, 24, 183-195.	1.8	147
92	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
93	Source-sink turbulence in a rotating stratified fluid. <i>Journal of Fluid Mechanics</i> , 1995, 298, 81-112.	3.4	30
94	Source-sink turbulence in a stratified fluid. <i>Journal of Fluid Mechanics</i> , 1994, 261, 273-303.	3.4	19
95	Rayleigh-Taylor instability: experiments with image analysis. <i>Dynamics of Atmospheres and Oceans</i> , 1993, 20, 127-153.	1.8	103
96	Maximal Exchange in Channels with Nonrectangular Cross Sections. <i>Journal of Physical Oceanography</i> , 1992, 22, 1188-1206.	1.7	29
97	Decay of rotating turbulence: some particle tracking experiments. <i>Flow, Turbulence and Combustion</i> , 1992, 49, 217-244.	0.2	80
98	Two-layer hydraulics: a functional approach. <i>Journal of Fluid Mechanics</i> , 1991, 223, 135.	3.4	100
99	The hydraulics of doorway exchange flows. <i>Building and Environment</i> , 1991, 26, 121-135.	6.9	41