

# Stuart B Dalziel

## List of Publications by Citations

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101  
papers

2,936  
citations

28  
h-index

51  
g-index

104  
ext. papers

3,302  
ext. citations

3.4  
avg, IF

5.45  
L-index

#	Paper	IF	Citations
101	Gravity currents produced by lock exchange. <i>Journal of Fluid Mechanics</i> , <b>2004</b> , 521, 1-34	3.7	275
100	Whole-field density measurements by synthetic schlieren <i>Experiments in Fluids</i> , <b>2000</b> , 28, 322-335	2.5	236
99	Self-similarity and internal structure of turbulence induced by Rayleigh-Taylor instability. <i>Journal of Fluid Mechanics</i> , <b>1999</b> , 399, 1-48	3.7	180
98	Visualization and measurement of internal waves by synthetic schlieren Part 1. Vertically oscillating cylinder. <i>Journal of Fluid Mechanics</i> , <b>1999</b> , 390, 93-126	3.7	127
97	Effects of ventilation on the indoor spread of COVID-19. <i>Journal of Fluid Mechanics</i> , <b>2020</b> , 903, F1	3.7	127
96	Mixing in lock-release gravity currents. <i>Dynamics of Atmospheres and Oceans</i> , <b>1996</b> , 24, 183-195	1.9	115
95	Structure formation in homogeneous freely decaying rotating turbulence. <i>Journal of Fluid Mechanics</i> , <b>2008</b> , 598, 81-105	3.7	93
94	Two-layer hydraulics: a functional approach. <i>Journal of Fluid Mechanics</i> , <b>1991</b> , 223, 135	3.7	89
93	Rayleigh-Taylor instability: experiments with image analysis. <i>Dynamics of Atmospheres and Oceans</i> , <b>1993</b> , 20, 127-153	1.9	80
92	Decay of rotating turbulence: some particle tracking experiments. <i>Flow, Turbulence and Combustion</i> , <b>1992</b> , 49, 217-244		78
91	On the evolution of eddies in a rapidly rotating system. <i>Journal of Fluid Mechanics</i> , <b>2006</b> , 557, 135	3.7	77
90	Dust resuspension by the flow around an impacting sphere. <i>Journal of Fluid Mechanics</i> , <b>2000</b> , 403, 305-328	3.7	59
89	Simultaneous synthetic schlieren and PIV measurements for internal solitary waves. <i>Measurement Science and Technology</i> , <b>2007</b> , 18, 533-547	2	58
88	Time-dependent plumes and jets with decreasing source strengths. <i>Journal of Fluid Mechanics</i> , <b>2006</b> , 563, 443	3.7	56
87	Mixing efficiency in high-aspect-ratio Rayleigh-Taylor experiments. <i>Physics of Fluids</i> , <b>2008</b> , 20, 065106	4.4	50
86	Observations on the wavenumber spectrum and evolution of an internal wave attractor. <i>Journal of Fluid Mechanics</i> , <b>2008</b> , 598, 373-382	3.7	45
85	Sediment resuspension and erosion by vortex rings. <i>Physics of Fluids</i> , <b>2009</b> , 21, 046601	4.4	44

84	A study of three-dimensional gravity currents on a uniform slope. <i>Journal of Fluid Mechanics</i> , <b>2002</b> , 453, 239-261	3.7	43
83	Small Atwood number Rayleigh-Taylor experiments. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , <b>2010</b> , 368, 1663-79	3	37
82	Efficient mixing in stratified flows: experimental study of a Rayleigh-Taylor unstable interface within an otherwise stable stratification. <i>Journal of Fluid Mechanics</i> , <b>2014</b> , 756, 1027-1057	3.7	36
81	Vortical motion in the head of an axisymmetric gravity current. <i>Physics of Fluids</i> , <b>2006</b> , 18, 046601	4.4	36
80	Bubble size distribution in dissolved air flotation tanks <b>2004</b> , 53, 531-543		33
79	The structure of the head of an inertial gravity current determined by particle-tracking velocimetry. <i>Experiments in Fluids</i> , <b>2003</b> , 34, 708-716	2.5	33
78	The hydraulics of doorway exchange flows. <i>Building and Environment</i> , <b>1991</b> , 26, 121-135	6.5	32
77	Saline and particle-driven interfacial intrusions. <i>Journal of Fluid Mechanics</i> , <b>1999</b> , 389, 303-334	3.7	31
76	The synthesis of di-carboxylate esters using continuous flow vortex fluidics. <i>Green Chemistry</i> , <b>2016</b> , 18, 2193-2200	10	30
75	Rayleigh-Taylor instability in complex stratifications. <i>Journal of Fluid Mechanics</i> , <b>2005</b> , 542, 251	3.7	29
74	Rayleigh-Taylor mixing in an otherwise stable stratification. <i>Journal of Fluid Mechanics</i> , <b>2011</b> , 688, 507-527.	3.7	28
73	Source-sink turbulence in a rotating stratified fluid. <i>Journal of Fluid Mechanics</i> , <b>1995</b> , 298, 81-112	3.7	27
72	Fluid displacement by Stokes flow past a spherical droplet. <i>Journal of Fluid Mechanics</i> , <b>2003</b> , 485, 67-85	3.7	26
71	Maximal Exchange in Channels with Nonrectangular Cross Sections. <i>Journal of Physical Oceanography</i> , <b>1992</b> , 22, 1188-1206	2.4	26
70	Continuous flow Fischer esterifications harnessing vibrational-coupled thin film fluidics. <i>RSC Advances</i> , <b>2015</b> , 5, 1655-1660	3.7	24
69	Turbulent diffusion in tall tubes. I. Models for Rayleigh-Taylor instability. <i>Physics of Fluids</i> , <b>2011</b> , 23, 085109	4.9	24
68	Time-dependent mixing in stratified Kelvin-Helmholtz billows: Experimental observations. <i>Geophysical Research Letters</i> , <b>2006</b> , 33,	4.9	22
67	Boussinesq plumes and jets with decreasing source strengths in stratified environments. <i>Journal of Fluid Mechanics</i> , <b>2006</b> , 563, 463	3.7	22

66	Tomographic reconstruction of internal wave patterns in a paraboloid. <i>Experiments in Fluids</i> , <b>2011</b> , 50, 247-258	2.5	21
65	Internal wave fields generated by a translating body in a stratified fluid: an experimental comparison. <i>Journal of Fluid Mechanics</i> , <b>2006</b> , 564, 305	3.7	21
64	A dynamic masking technique for combined measurements of PIV and synthetic schlieren applied to internal gravity waves. <i>Measurement Science and Technology</i> , <b>2005</b> , 16, 1954-1960	2	19
63	Electrical measurement of sediment layer thickness under suspension flows. <i>Experiments in Fluids</i> , <b>1999</b> , 26, 470-474	2.5	19
62	Source-sink turbulence in a stratified fluid. <i>Journal of Fluid Mechanics</i> , <b>1994</b> , 261, 273-303	3.7	19
61	Comparison of laboratory and numerically observed scalar fields of an internal wave attractor. <i>European Journal of Mechanics, B/Fluids</i> , <b>2011</b> , 30, 51-56	2.4	18
60	Attenuation technique for measuring sediment displacement levels. <i>Experiments in Fluids</i> , <b>2005</b> , 39, 602-613	3.3	18
59	Internal waves revisited. <i>Dynamics of Atmospheres and Oceans</i> , <b>2000</b> , 31, 209-232	1.9	18
58	Axisymmetric gravity currents on a cone. <i>Journal of Fluid Mechanics</i> , <b>2006</b> , 565, 227	3.7	17
57	Internal wave fields and drag generated by a translating body in a stratified fluid. <i>Journal of Fluid Mechanics</i> , <b>2004</b> , 498, 289-313	3.7	17
56	Measurements of layer depth during baroclinic instability in a two-layer flow. <i>Flow, Turbulence and Combustion</i> , <b>1996</b> , 56, 191-207		17
55	The structure and origin of confined Holmboe waves. <i>Journal of Fluid Mechanics</i> , <b>2018</b> , 848, 508-544	3.7	16
54	Time- and Space-Resolved Measurements of Deposition under Turbidity Currents		16
53	Observations on the robustness of internal wave attractors to perturbations. <i>Physics of Fluids</i> , <b>2010</b> , 22, 107102	4.4	15
52	Resuspension onset and crater erosion by a vortex ring interacting with a particle layer. <i>Physics of Fluids</i> , <b>2012</b> , 24, 063301	4.4	15
51	Temporal variation of non-ideal plumes with sudden reductions in buoyancy flux. <i>Journal of Fluid Mechanics</i> , <b>2008</b> , 600, 181-199	3.7	15
50	Rayleigh-Taylor instability at a tilted interface in laboratory experiments and numerical simulations. <i>Laser and Particle Beams</i> , <b>2003</b> , 21, 419-423	0.9	15
49	A light attenuation technique for void fraction measurement of microbubbles. <i>Experiments in Fluids</i> , <b>2001</b> , 30, 214-220	2.5	15

48	On the meaning of mixing efficiency for buoyancy-driven mixing in stratified turbulent flows. <i>Journal of Fluid Mechanics</i> , <b>2015</b> , 781, 261-275	3.7	14
47	Three-dimensional visualization of the interaction of a vortex ring with a stratified interface. <i>Journal of Fluid Mechanics</i> , <b>2017</b> , 820, 549-579	3.7	13
46	The evolution of a stratified turbulent cloud. <i>Journal of Fluid Mechanics</i> , <b>2014</b> , 739, 229-253	3.7	12
45	Turbulent diffusion in tall tubes. II. Confinement by stratification. <i>Physics of Fluids</i> , <b>2011</b> , 23, 085110	4.4	12
44	The drag on a vertically moving grid of bars in a linearly stratified fluid. <i>Experiments in Fluids</i> , <b>2003</b> , 34, 678-686	2.5	12
43	Numerical modelling of two-dimensional and axisymmetric gravity currents. <i>International Journal for Numerical Methods in Fluids</i> , <b>2005</b> , 47, 1221-1227	1.9	12
42	Inclined gravity currents filling basins: the impact of peeling detrainment on transport and vertical structure. <i>Journal of Fluid Mechanics</i> , <b>2017</b> , 820, 400-423	3.7	11
41	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> , <b>2016</b> , 74, 429-443	3	11
40	Cleaning of viscous drops on a flat inclined surface using gravity-driven film flows. <i>Food and Bioproducts Processing</i> , <b>2015</b> , 93, 310-317	4.9	10
39	Bedload transport by a vertical jet impinging upon sediments. <i>Physics of Fluids</i> , <b>2014</b> , 26, 035103	4.4	10
38	Local implications for self-similar turbulent plume models. <i>Journal of Fluid Mechanics</i> , <b>2007</b> , 575, 257-265.7		10
37	A pattern matching technique for measuring sediment displacement levels. <i>Experiments in Fluids</i> , <b>2004</b> , 37, 399-408	2.5	10
36	Vortex-ring-induced stratified mixing. <i>Journal of Fluid Mechanics</i> , <b>2015</b> , 781, 113-126	3.7	9
35	Evolution of the Leading-Edge Vortex over an Accelerating Rotating Wing. <i>Procedia IUTAM</i> , <b>2013</b> , 7, 233-242		9
34	Anticyclonic precession of a plume in a rotating environment. <i>Geophysical Research Letters</i> , <b>2017</b> , 44, 9400-9407	4.9	9
33	The structure of low-Froude-number lee waves over an isolated obstacle. <i>Journal of Fluid Mechanics</i> , <b>2011</b> , 689, 3-31	3.7	9
32	Experimental investigations of quasi-two-dimensional vortices in a stratified fluid with source-sink forcing. <i>Journal of Fluid Mechanics</i> , <b>1999</b> , 383, 249-283	3.7	9
31	Simultaneous particle image velocimetry and synthetic schlieren measurements of an erupting thermal plume. <i>Measurement Science and Technology</i> , <b>2009</b> , 20, 125402	2	8

30	An experimental study of the bulk properties of vortex rings translating through a stratified fluid. <i>European Journal of Mechanics, B/Fluids</i> , <b>2006</b> , 25, 302-320	2.4	8
29	Particle organization after viscous sedimentation in tilted containers. <i>Physics of Fluids</i> , <b>2016</b> , 28, 073304	4.4	8
28	Neutron imaging and modelling inclined vortex driven thin films. <i>Scientific Reports</i> , <b>2019</b> , 9, 2817	4.9	7
27	Vortex rings impinging on permeable boundaries. <i>Physics of Fluids</i> , <b>2015</b> , 27, 015106	4.4	7
26	Resuspension by saline and particle-driven gravity currents. <i>Journal of Geophysical Research</i> , <b>2001</b> , 106, 14095-14111		7
25	Using stratification to mitigate end effects in quasi-Keplerian Taylor-Couette flow. <i>Journal of Fluid Mechanics</i> , <b>2016</b> , 791, 608-630	3.7	7
24	A versatile scanning method for volumetric measurements of velocity and density fields. <i>Measurement Science and Technology</i> , <b>2019</b> , 30, 055203	2	6
23	Inclined gravity currents filling basins: The influence of Reynolds number on entrainment into gravity currents. <i>Physics of Fluids</i> , <b>2015</b> , 27, 096602	4.4	6
22	Convective mass transfer from a submerged drop in a thin falling film. <i>Journal of Fluid Mechanics</i> , <b>2016</b> , 789, 630-668	3.7	5
21	Interaction between the Blasius boundary layer and a free surface. <i>Journal of Fluid Mechanics</i> , <b>2018</b> , 839, 839,	3.7	4
20	Vortex-ring-induced stratified mixing: mixing model. <i>Journal of Fluid Mechanics</i> , <b>2018</b> , 837, 129-146	3.7	4
19	Bursting water balloons. <i>Journal of Fluid Mechanics</i> , <b>2014</b> , 756, 771-815	3.7	4
18	Synthetic schlieren: Determination of the density gradient generated by internal waves propagating in a stratified fluid. <i>Journal of Physics: Conference Series</i> , <b>2009</b> , 166, 012007	0.3	4
17	Metal-silicate mixing by large Earth-forming impacts. <i>Earth and Planetary Science Letters</i> , <b>2021</b> , 564, 116888	3.9	4
16	Air Flow Experiments on a Train Carriage Towards Understanding the Risk of Airborne Transmission. <i>Atmosphere</i> , <b>2021</b> , 12, 1267	2.7	4
15	The granular Blasius problem. <i>Journal of Fluid Mechanics</i> , <b>2019</b> , 872, 784-817	3.7	3
14	The magic carpet: an arbitrary spectrum wave maker for internal waves. <i>Experiments in Fluids</i> , <b>2019</b> , 60, 1	2.5	3
13	The twists and turns of rotating turbulence. <i>Journal of Fluid Mechanics</i> , <b>2011</b> , 666, 1-4	3.7	3

12	Experimental studies of rotating exchange flow. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , <b>2007</b> , 54, 269-291	2.5	2
11	Particle resuspension by an impacting vortex ring <b>2003</b> , 105-108		2
10	Experimental evidence of internal wave attractor signatures hidden in large-amplitude multi-frequency wave fields. <i>Journal of Fluid Mechanics</i> , <b>2021</b> , 915,	3.7	2
9	Turbulent jets with off-source heating. <i>Journal of Fluid Mechanics</i> , <b>2017</b> , 824, 766-784	3.7	1
8	A new nozzle for dissolved air flotation. <i>Water Science and Technology: Water Supply</i> , <b>2009</b> , 9, 611-617	1.4	1
7	Effects of background rotation on the dynamics of multiphase plumes. <i>Journal of Fluid Mechanics</i> , <b>2021</b> , 915,	3.7	1
6	Harmonics from a magic carpet. <i>Journal of Fluid Mechanics</i> , <b>2021</b> , 911,	3.7	1
5	Rayleigh-Taylor instability between unequally stratified layers. <i>Physica D: Nonlinear Phenomena</i> , <b>2021</b> , 423, 132907	3.3	1
4	Structure Formation in Homogeneous Rotating Turbulence <b>2007</b> , 612-614		
3	On the Large Scale Evolution of Rotating Turbulence. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , <b>2008</b> , 391-396	0.3	
2	Experiments on Turbulence in Stratified Rotating Flows. <i>Fluid Mechanics and Its Applications</i> , <b>1996</b> , 317-330		
1	Observations on Rapidly Rotating Turbulence. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , <b>2010</b> , 95-104	0.3	