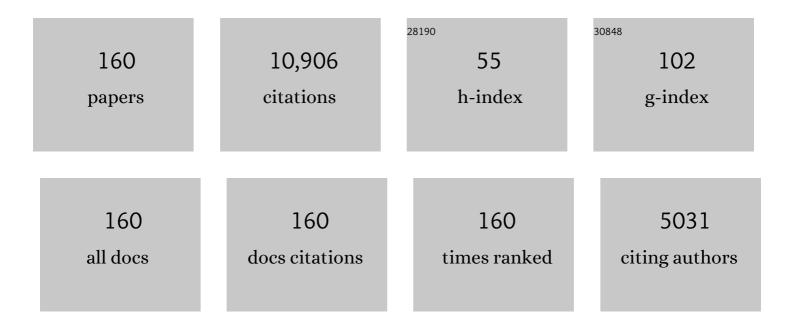
Herbert E Huppert

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	The propagation of two-dimensional and axisymmetric viscous gravity currents over a rigid horizontal surface. Journal of Fluid Mechanics, 1982, 121, 43.	1.4	740
2	The slumping of gravity currents. Journal of Fluid Mechanics, 1980, 99, 785-799.	1.4	512
3	Double-diffusive convection. Journal of Fluid Mechanics, 1981, 106, 299.	1.4	486
4	Flow and instability of a viscous current down a slope. Nature, 1982, 300, 427-429.	13.7	465
5	Axisymmetric collapses of granular columns. Journal of Fluid Mechanics, 2004, 508, 175-199.	1.4	301
6	Particle-driven gravity currents. Journal of Fluid Mechanics, 1993, 250, 339-369.	1.4	300
7	The Fluid Mechanics of Carbon Dioxide Sequestration. Annual Review of Fluid Mechanics, 2014, 46, 255-272.	10.8	288
8	Convective dissolution of carbon dioxide in saline aquifers. Geophysical Research Letters, 2010, 37, .	1.5	266
9	Emplacement and cooling of komatiite lavas. Nature, 1984, 309, 19-22.	13.7	255
10	Gravity-driven flows in porous layers. Journal of Fluid Mechanics, 1995, 292, 55-69.	1.4	241
11	The fluid mechanics of solidification. Journal of Fluid Mechanics, 1990, 212, 209.	1.4	237
12	Thermal control of basaltic fissure eruptions. Nature, 1989, 342, 665-667.	13.7	199
13	The role of volatiles in magma chamber dynamics. Nature, 2002, 420, 493-495.	13.7	195
14	Effects of volatiles on mixing in calc-alkaline magma systems. Nature, 1982, 297, 554-557.	13.7	189
15	Ice blocks melting into a salinity gradient. Journal of Fluid Mechanics, 1980, 100, 367.	1.4	188
16	Gravity currents: a personal perspective. Journal of Fluid Mechanics, 2006, 554, 299.	1.4	182
17	Nonlinear double-diffusive convection. Journal of Fluid Mechanics, 1976, 78, 821.	1.4	177
18	Density changes during the fractional crystallization of basaltic magmas: fluid dynamic implications. Contributions To Mineralogy and Petrology, 1984, 85, 300-309.	1.2	173

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19	Dynamic solidification of a binary melt. Nature, 1985, 314, 703-707.	13.7	170
20	On lava dome growth, with application to the 1979 lava extrusion of the soufrière of St. Vincent. Journal of Volcanology and Geothermal Research, 1982, 14, 199-222.	0.8	167
21	Natural convection during solidification of an alloy from above with application to the evolution of sea ice. Journal of Fluid Mechanics, 1997, 344, 291-316.	1.4	166
22	Entrainment into two-dimensional and axisymmetric turbulent gravity currents. Journal of Fluid Mechanics, 1996, 308, 289-311.	1.4	165
23	On heating a stable salinity gradient from below. Journal of Fluid Mechanics, 1979, 95, 431.	1.4	153
24	Axisymmetric particle-driven gravity currents. Journal of Fluid Mechanics, 1995, 294, 93-121.	1.4	142
25	Some remarks on the initiation of inertial Taylor columns. Journal of Fluid Mechanics, 1975, 67, 397-412.	1.4	141
26	Axisymmetric gravity currents in a porous medium. Journal of Fluid Mechanics, 2005, 543, 293.	1.4	134
27	The intrusion of fluid mechanics into geology. Journal of Fluid Mechanics, 1986, 173, 557-594.	1.4	128
28	Analytical model for solidification of the Earth's core. Nature, 1992, 356, 329-331.	13.7	125
29	Emplacement of the Taupo ignimbrite by a dilute turbulent flow. Nature, 1996, 381, 509-512.	13.7	113
30	Extreme natural hazards: population growth, globalization and environmental change. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 1875-1888.	1.6	105
31	On melting icebergs. Nature, 1978, 271, 46-48.	13.7	100
32	Solidification of an alloy cooled from above Part 1. Equilibrium growth. Journal of Fluid Mechanics, 1990, 216, 323-342.	1.4	99
33	Two-dimensional viscous gravity currents flowing over a deep porous medium. Journal of Fluid Mechanics, 2001, 440, 359-380.	1.4	97
34	Melting the roof of a chamber containing a hot, turbulently convecting fluid. Journal of Fluid Mechanics, 1988, 188, 107-131.	1.4	91
35	Gravity currents in a porous medium at an inclined plane. Journal of Fluid Mechanics, 2006, 555, 353.	1.4	90
36	Entrainment in turbulent gravity currents. Nature, 1993, 362, 829-831.	13.7	87

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37	A box model for non-entraining, suspension-driven gravity surges on horizontal surfaces. Sedimentology, 1995, 42, 453-470.	1.6	87
38	Restrictions on the compositions of mid-ocean ridge basalts: a fluid dynamical investigation. Nature, 1980, 286, 46-48.	13.7	86
39	Spreading and convective dissolution of carbon dioxide in vertically confined, horizontal aquifers. Water Resources Research, 2012, 48, .	1.7	84
40	Two-phase gravity currents in porous media. Journal of Fluid Mechanics, 2011, 678, 248-270.	1.4	82
41	Time-dependent density profiles in a filling box. Journal of Fluid Mechanics, 1983, 132, 457-466.	1.4	78
42	Effects of external flow on compositional and particle gravity currents. Journal of Fluid Mechanics, 1998, 359, 109-142.	1.4	72
43	Sedimentation of particles from a convecting fluid. Nature, 1990, 343, 447-450.	13.7	71
44	Origin of modal and rhythmic igneous layering by sedimentation in a convecting magma chamber. Nature, 1993, 361, 246-249.	13.7	71
45	Erosion by planar turbulent wall jets. Journal of Fluid Mechanics, 1997, 338, 317-340.	1.4	70
46	Abrupt transitions in high-concentration, particle-driven gravity currents. Physics of Fluids, 1998, 10, 1083-1087.	1.6	69
47	Disequilibrium and macrosegregation during solidification of a binary melt. Nature, 1989, 340, 357-362.	13.7	68
48	Granular column collapses: further experimental results. Journal of Fluid Mechanics, 2007, 575, 177-186.	1.4	68
49	the phase evolution of Young Sea Ice. Geophysical Research Letters, 1997, 24, 1251-1254.	1.5	67
50	Bi-directional flows in constrained systems. Journal of Fluid Mechanics, 2007, 578, 95-112.	1.4	66
51	Flow and instability of thin films on a cylinder and sphere. Journal of Fluid Mechanics, 2010, 647, 221-238.	1.4	66
52	Gravity currents entering a two-layer fluid. Journal of Fluid Mechanics, 1980, 100, 739-767.	1.4	64
53	On gravity currents propagating at the base of a stratified ambient. Journal of Fluid Mechanics, 2002, 458, 283-301.	1.4	63
54	Steady-state solidification of aqueous ammonium chloride. Journal of Fluid Mechanics, 2008, 599, 465-476.	1.4	59

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55	Axisymmetric gravity currents in a rotating system: experimental and numerical investigations. Journal of Fluid Mechanics, 2001, 447, 1-29.	1.4	57
56	Solidification of an alloy cooled from above Part 2. Non-equilibrium interfacial kinetics. Journal of Fluid Mechanics, 1990, 217, 331-348.	1.4	56
57	Modelling carbon dioxide sequestration in layered strata. Journal of Fluid Mechanics, 2009, 625, 353-370.	1.4	55
58	Fluid injection into a confined porous layer. Journal of Fluid Mechanics, 2014, 745, 592-620.	1.4	55
59	Granular column collapses down rough, inclined channels. Journal of Fluid Mechanics, 2011, 675, 347-368.	1.4	54
60	Bending of elastic fibres in viscous flows: the influence of confinement. Journal of Fluid Mechanics, 2013, 720, 517-544.	1.4	52
61	Sedimentation and entrainment in dense layers of suspended particles stirred by an oscillating grid. Journal of Fluid Mechanics, 1995, 289, 263-293.	1.4	50
62	Convection and particle entrainment driven by differential sedimentation. Journal of Fluid Mechanics, 1991, 226, 349-369.	1.4	48
63	The effects of rotation on axisymmetric gravity currents. Journal of Fluid Mechanics, 1998, 362, 17-51.	1.4	47
64	Polydisperse particle-driven gravity currents. Journal of Fluid Mechanics, 2002, 472, 333-371.	1.4	45
65	The effect of a fissure on storage in a porous medium. Journal of Fluid Mechanics, 2009, 639, 239-259.	1.4	44
66	Magnetic resonance imaging of structure and convection in solidifying mushy layers. Journal of Fluid Mechanics, 2006, 552, 99.	1.4	43
67	Steady-state mushy layers: experiments and theory. Journal of Fluid Mechanics, 2007, 570, 69-77.	1.4	42
68	The fluid dynamics of crustal melting by injection of basaltic sills. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 1988, 79, 237-243.	0.3	40
69	Fluid drainage from the edge of a porous reservoir. Journal of Fluid Mechanics, 2013, 718, 558-568.	1.4	40
70	The effects of capillary forces on the axisymmetric propagation of two-phase, constant-flux gravity currents in porous media. Physics of Fluids, 2013, 25, .	1.6	40
71	Diffusion-controlled solidification of a ternary melt from a cooled boundary. Journal of Fluid Mechanics, 2001, 432, 201-217.	1.4	38
72	Phase changes following the initiation of a hot turbulent flow over a cold solid surface. Journal of Fluid Mechanics, 1989, 198, 293.	1.4	35

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73	Reversing buoyancy of particle-driven gravity currents. Physics of Fluids, 1999, 11, 2891-2900.	1.6	32
74	On gravity currents driven by constant fluxes of saline and particle-laden fluid in the presence of a uniform flow. Journal of Fluid Mechanics, 2005, 539, 349.	1.4	32
75	Solidification of an alloy cooled from above. Part 3. Compositional stratification within the solid. Journal of Fluid Mechanics, 1990, 218, 337.	1.4	30
76	The effect of confining boundaries on viscous gravity currents. Journal of Fluid Mechanics, 2007, 577, 495-505.	1.4	30
77	High-Reynolds-number gravity currents over a porous boundary: shallow-water solutions and box-model approximations. Journal of Fluid Mechanics, 2000, 418, 1-23.	1.4	29
78	Dynamics of viscous grounding lines. Journal of Fluid Mechanics, 2010, 648, 363-380.	1.4	29
79	Leakage from gravity currents in a porous medium. Part 1. A localized sink. Journal of Fluid Mechanics, 2011, 666, 391-413.	1.4	29
80	The effect of confining impermeable boundaries on gravity currents in a porous medium. Journal of Fluid Mechanics, 2010, 649, 1-17.	1.4	28
81	On Howard's technique for perturbing neutral solutions of the Taylor-Goldstein equation. Journal of Fluid Mechanics, 1973, 57, 361.	1.4	27
82	Mixing of an interflow into the ambient water of Lake Iseo. Limnology and Oceanography, 2013, 58, 579-592.	1.6	27
83	On gravity currents propagating at the base of a stratified ambient: effects of geometrical constraints and rotation. Journal of Fluid Mechanics, 2004, 521, 69-104.	1.4	26
84	Energy balances for propagating gravity currents: homogeneous and stratified ambients. Journal of Fluid Mechanics, 2006, 565, 363.	1.4	26
85	On the hydrodynamic interaction between a particle and a permeable surface. Physics of Fluids, 2013, 25, 073103.	1.6	26
86	Capillary pinning and blunting of immiscible gravity currents in porous media. Water Resources Research, 2014, 50, 7067-7081.	1.7	26
87	Modelling intrusions through quiescent and moving ambients. Journal of Fluid Mechanics, 2015, 771, 370-406.	1.4	25
88	Elastic Relaxation of Fluid-Driven Cracks and the Resulting Backflow. Physical Review Letters, 2016, 117, 268001.	2.9	24
89	A mathematical framework for the analysis of particle–driven gravity currents. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2001, 457, 1241-1272.	1.0	22
90	Leakage from gravity currents in a porous medium. Part 2. A line sink. Journal of Fluid Mechanics, 2011, 666, 414-427.	1.4	22

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91	The competition between gravity and flow focusing in two-layered porous media. Journal of Fluid Mechanics, 2013, 720, 5-14.	1.4	22
92	Transitions in double-diffusive convection. Nature, 1976, 263, 20-22.	13.7	21
93	Particulate gravity currents along V-shaped valleys. Journal of Fluid Mechanics, 2009, 631, 419-440.	1.4	21
94	The effect of side walls on homogeneous rotating flow over two-dimensional obstacles. Journal of Fluid Mechanics, 1974, 62, 417.	1.4	20
95	The growth of compositionally stratified solid above a horizontal boundary. Journal of Fluid Mechanics, 1989, 199, 29-53.	1.4	20
96	Solidification and compositional convection of a ternary alloy. Journal of Fluid Mechanics, 2003, 497, 167-199.	1.4	19
97	The Physical Processes involved in the Melting of Icebergs (Invited paper). Annals of Glaciology, 1980, 1, 97-101.	2.8	19
98	Dissolution-driven convection in a reactive porous medium. Journal of Fluid Mechanics, 2005, 535, 255-285.	1.4	18
99	Viscous gravity currents inside confining channels and fractures. Physics of Fluids, 2008, 20, 023104.	1.6	18
100	Dynamics of viscous backflow from a model fracture network. Journal of Fluid Mechanics, 2018, 836, 828-849.	1.4	16
101	Deposition morphology of granular column collapses. Granular Matter, 2021, 23, 1.	1.1	16
102	Solidification and convection of a ternary solution cooled from the side. Journal of Fluid Mechanics, 2003, 489, 269-299.	1.4	15
103	The waterlogging of floating objects. Journal of Fluid Mechanics, 2007, 585, 245-254.	1.4	15
104	Inclined gravity currents filling basins: the impact of peeling detrainment on transport andÂverticalÂstructure. Journal of Fluid Mechanics, 2017, 820, 400-423.	1.4	15
105	Self-similar solutions of the axisymmetric shallow-water equations governing converging inviscid gravity currents. Journal of Fluid Mechanics, 2004, 506, 331-355.	1.4	14
106	Natural Disasters: Explosive Volcanic Eruptions and Gigantic Landslides. Theoretical and Computational Fluid Dynamics, 1998, 10, 201-212.	0.9	13
107	Experimental exploration of fluid-driven cracks in brittle hydrogels. Journal of Fluid Mechanics, 2018, 844, 435-458.	1.4	13
108	Emplacement of Taupo ignimbrite. Nature, 1997, 385, 307-308.	13.7	12

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109	On inwardly propagating high-Reynolds-number axisymmetric gravity currents. Journal of Fluid Mechanics, 2003, 494, 255-274.	1.4	12
110	The growth and structure of double-diffusive cells adjacent to a cooled sidewall in a salt-stratified environment. Journal of Fluid Mechanics, 2004, 518, 347-362.	1.4	12
111	Carbon: No silver bullet. Science, 2014, 345, 1130-1130.	6.0	12
112	Similarity solutions and viscous gravity current adjustment times. Journal of Fluid Mechanics, 2019, 874, 285-298.	1.4	12
113	Gravity currents from a line source in an ambient flow. Journal of Fluid Mechanics, 2008, 606, 1-26.	1.4	10
114	Fluid migration between confined aquifers. Journal of Fluid Mechanics, 2014, 757, 330-353.	1.4	10
115	Stratified gravity currents in porous media. Journal of Fluid Mechanics, 2016, 791, 329-357.	1.4	10
116	Finiteâ€ S ize Analysis of the Collapse of Dry Granular Columns. Geophysical Research Letters, 2021, 48, e2021GL096054.	1.5	10
117	Compressible particle-driven gravity currents. Journal of Fluid Mechanics, 2001, 445, 305-325.	1.4	9
118	Effects of particle sedimentation and rotation on axisymmetric gravity currents. Physics of Fluids, 2001, 13, 3687-3698.	1.6	9
119	Numerical modelling of convection in a reactive porous medium with a mobile mush–liquid interface. Journal of Fluid Mechanics, 2006, 549, 99.	1.4	9
120	Energy balances for axisymmetric gravity currents in homogeneous and linearly stratified ambients. Journal of Fluid Mechanics, 2008, 616, 303-326.	1.4	9
121	Surface curvature of steady granular flows. Granular Matter, 2012, 14, 229-234.	1.1	9
122	Topographic controls on gravity currents in porous media. Journal of Fluid Mechanics, 2013, 734, 317-337.	1.4	9
123	Two-phase gravity currents resulting from the release of a fixed volume of fluid in a porousÂmedium. Journal of Fluid Mechanics, 2017, 832, 550-577.	1.4	9
124	Interaction of viscous free-surface flowsÂwithÂtopography. Journal of Fluid Mechanics, 2019, 876, 912-938.	1.4	9
125	Stokes drift in coral reefs with depth-varying permeability. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190531.	1.6	9
126	Ageostrophic effects in rotating stratified flow. Journal of Fluid Mechanics, 1974, 62, 369-385.	1.4	8

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127	Contaminated komatiites (reply). Nature, 1985, 313, 247-248.	13.7	8
128	Solidification of a binary alloy of variable viscosity from a vertical boundary. Journal of Fluid Mechanics, 1995, 303, 103-132.	1.4	8
129	Spreading and deposition of particulate matter in uniform flows. Journal of Hydraulic Research/De Recherches Hydrauliques, 2001, 39, 505-518.	0.7	8
130	Axisymmetric, constantly supplied gravity currents at high Reynolds number. Journal of Fluid Mechanics, 2011, 675, 540-551.	1.4	8
131	Shallow free-surface Stokes flow around a corner. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190515.	1.6	8
132	Inclined gravity currents filling basins: The influence of Reynolds number on entrainment into gravity currents. Physics of Fluids, 2015, 27, 096602.	1.6	7
133	Backflow from a model fracture network: anÂasymptotic investigation. Journal of Fluid Mechanics, 2019, 864, 899-924.	1.4	7
134	Experimental Insights on the Propagation of Fineâ€Grained Geophysical Flows Entering Water. Journal of Geophysical Research: Oceans, 2021, 126, e2020JC016838.	1.0	7
135	Stokes drift through corals. Environmental Fluid Mechanics, 2021, 21, 1119-1135.	0.7	7
136	Spreading or contraction of viscous drops between plates: single, multiple or annular drops. Journal of Fluid Mechanics, 2021, 925, .	1.4	7
137	Compressible vapour flow in conduits and fractures. Journal of Fluid Mechanics, 2016, 802, 750-759.	1.4	6
138	The relaxation time for viscous and porous gravity currents following a change in flux. Journal of Fluid Mechanics, 2017, 821, 330-342.	1.4	6
139	Multicomponent convection: Turbulence in Earth, Sun and sea. Nature, 1983, 303, 478-479.	13.7	5
140	Crystallization and layering induced by heating a reactive porous medium. Geophysical Research Letters, 2004, 31, n/a-n/a.	1.5	5
141	Symmetric coalescence of two hydraulic fractures. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 10228-10232.	3.3	5
142	The oceanography of fjords. Nature, 1979, 280, 273-274.	13.7	4
143	Instability of a gravity current within a soapÂfilm. Journal of Fluid Mechanics, 2014, 753, .	1.4	4
144	Maximal liquid bridges between horizontal cylinders. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20160233.	1.0	4

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145	A note on the howard-Malkus-Whitehead floating heat sources. Geophysical Fluid Dynamics, 1971, 2, 317-322.	0.4	3
146	Flow of buoyant granular materials along a freeÂsurface. Journal of Fluid Mechanics, 2018, 848, 312-339.	1.4	3
147	The fate of continuous input of relatively heavy fluid at the base of a porous medium. Journal of Fluid Mechanics, 2022, 932, .	1.4	3
148	Crystal growth: From multi-branched snowflakes to precious minerals. Nature, 1986, 323, 202-203.	13.7	2
149	GEORGE KEITH BATCHELOR 8 March 1920–30 March 2000 Founding Editor, Journal of Fluid Mechanics, 1956. Journal of Fluid Mechanics, 2000, 421, 1-14.	1.4	2
150	Fluid invasion of an unsaturated leaky porous layer. Journal of Fluid Mechanics, 2015, 777, 97-121.	1.4	2
151	Time to Approach Similarity. Quarterly Journal of Mechanics and Applied Mathematics, 0, , .	0.5	1
152	Stokes at 200: a celebration of the remarkable achievements of Sir George Gabriel Stokes two hundred years after his birth. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190505.	1.6	1
153	Viscous backflow from a model fracture network: influence of a permeable boundary. Journal of Fluid Mechanics, 2021, 911, .	1.4	1
154	Two-phase gravity currents in porous media. Journal of Fluid Mechanics, 0, , 1-23.	1.4	1
155	Icebergs: technology for the future. Nature, 1980, 285, 67-68.	13.7	0
156	Fluid mechanics: G.I. Taylor and his influence. Nature, 1986, 322, 500-500.	13.7	0
157	Stokes, Tyndall, Ruskin and the nineteenth-century beginnings of climate science. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20200064.	1.6	0
158	Stokes at 200 (part 2). Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20200160.	1.6	0
159	Dense Suspension Flow in a Penny-Shaped Crack, Part I : Theory. Journal of the Mechanics and Physics of Solids, 2021, 152, 104417.	2.3	0
160	Viscous gravity currents over flat inclined surfaces. Journal of Fluid Mechanics, 2022, 931, .	1.4	0