Paul F Linden

List of Publications by Year
in descending order

147 papers	7,972 citations	66234 42 h-index	53109 85 g-index
151 all docs	151 docs citations	151 times ranked	4223 citing authors

#	Article	IF	Citations
1	The wood from the trees: The use of timber in construction. Renewable and Sustainable Energy Reviews, 2017, 68, 333-359.	8.2	721
2	THE FLUID MECHANICS OF NATURAL VENTILATION. Annual Review of Fluid Mechanics, 1999, 31, 201-238.	10.8	536
3	Emptying filling boxes: the fluid mechanics of natural ventilation. Journal of Fluid Mechanics, 1990, 212, 309.	1.4	372
4	Gravity currents produced by lock exchange. Journal of Fluid Mechanics, 2004, 521, 1-34.	1.4	337
5	Effects of ventilation on the indoor spread of COVID-19. Journal of Fluid Mechanics, 2020, 903, F1.	1.4	283
6	The motion of the front of a gravity current travelling down an incline. Journal of Fluid Mechanics, 1980, 99, 531-543.	1.4	267
7	Self-similarity and internal structure of turbulence induced by Rayleighâ€“Taylor instability. Journal of Fluid Mechanics, 1999, 399, 1-48.	1.4	210
8	Mixing in stratified fluids. Geophysical and Astrophysical Fluid Dynamics, 1979, 13, 3-23.	0.4	195
9	The stability of vortices in a rotating, stratified fluid. Journal of Fluid Mechanics, 1981, 105, 283.	1.4	175
10	The interaction of a vortex ring with a sharp density interface: a model for turbulent entrainment. Journal of Fluid Mechanics, 1973, 60, 467.	1.4	167
11	The deepening of a mixed layer in a stratified fluid. Journal of Fluid Mechanics, 1975, 71, 385-405.	1.4	166
12	Visualization and measurement of internal waves by â€˜synthetic schlierenâ€™. Part 1. Vertically oscillating cylinder. Journal of Fluid Mechanics, 1999, 390, 93-126.	1.4	155
13	On heating a stable salinity gradient from below. Journal of Fluid Mechanics, 1979, 95, 431.	1.4	153
14	The diffusive interface in double-diffusive convection. Journal of Fluid Mechanics, 1978, 87, 417.	1.4	139
15	Molecular mixing in Rayleighâ€“Taylor instability. Journal of Fluid Mechanics, 1994, 265, 97-124.	1.4	134
16	The formation of â€˜optimalâ€™ vortex rings, and the efficiency of propulsion devices. Journal of Fluid Mechanics, 2001, 427, 61-72.	1.4	134
17	The front condition for gravity currents. Journal of Fluid Mechanics, 2005, 536, 49-78.	1.4	133
18	Salt fingers in a steady shear flow. Geophysical Fluid Dynamics, 1974, 6, 1-27.	0.4	130

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19	Gravity-driven flows in a turbulent fluid. Journal of Fluid Mechanics, 1986, 172, 481.	1.4	119
20	Laboratory experiments on fronts. Geophysical and Astrophysical Fluid Dynamics, 1982, 19, 159-187.	0.4	110
21	The non-Boussinesq lock-exchange problem. Part 1. Theory and experiments. Journal of Fluid Mechanics, 2005, 537, 101.	1.4	108
22	Steady-state flows in an enclosure ventilated by buoyancy forces assisted by wind. Journal of Fluid Mechanics, 2001, 426, 355-386.	1.4	103
23	Similarity considerations for non-Boussinesq plumes in an unstratified environment. Journal of Fluid Mechanics, 1996, 318, 237.	1.4	97
24	The structure of turbulent density interfaces. Journal of Fluid Mechanics, 1974, 65, 45-63.	1.4	85
25	â€˜Optimalâ€™ vortex rings and aquatic propulsion mechanisms. Proceedings of the Royal Society B: Biological Sciences, 2004, 271, 647-653.	1.2	85
26	Coalescing axisymmetric turbulent plumes. Journal of Fluid Mechanics, 2004, 502, 41-63.	1.4	84
27	Multiple sources of buoyancy in a naturally ventilated enclosure. Journal of Fluid Mechanics, 1996, 311, 177.	1.4	76
28	Frontogenesis in a fluid with horizontal density gradients. Journal of Fluid Mechanics, 1989, 202, 1-16.	1.4	72
29	Natural ventilation of an enclosure containing two buoyancy sources. Journal of Fluid Mechanics, 1996, 311, 153.	1.4	71
30	Internal wave excitation from stratified flow over a thin barrier. Journal of Fluid Mechanics, 1998, 377, 223-252.	1.4	69
31	Displacement and mixing ventilation driven by opposing wind and buoyancy. Journal of Fluid Mechanics, 2005, 527, 27-55.	1.4	66
32	A laboratory study of the velocity structure in an intrusive gravity current. Journal of Fluid Mechanics, 2002, 456, 33-48.	1.4	63
33	Molecular mixing in Rayleighâ€“Taylor instability. Part I: Global mixing. Physics of Fluids A, Fluid Dynamics, 1991, 3, 1269-1277.	1.6	60
34	Lock-exchange flows in sloping channels. Journal of Fluid Mechanics, 2007, 577, 53-77.	1.4	60
35	Salt fingers in the presence of grid-generated turbulence. Journal of Fluid Mechanics, 1971, 49, 611.	1.4	55
36	The formation of layers in a double-diffusive system with a sloping boundary. Journal of Fluid Mechanics, 1977, 81, 757-773.	1.4	53

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37	On the origin of the circular hydraulic jump in a thin liquid film. Journal of Fluid Mechanics, 2018, 851, .	1.4	52
38	A study of three-dimensional gravity currents on a uniform slope. Journal of Fluid Mechanics, 2002, 453, 239-261.	1.4	50
39	Forced, angled plumes. Journal of Hazardous Materials, 1993, 33, 75-99.	6.5	48
40	Formation of thermoclines in zero-mean-shear turbulence subjected to a stabilizing buoyancy flux. Journal of Fluid Mechanics, 1982, 114, 157.	1.4	47
41	Internal wave excitation by a vertically oscillating elliptical cylinder. Physics of Fluids, 2002, 14, 721-731.	1.6	47
42	The ventilation of buildings and other mitigating measures for COVID-19: a focus on wintertime. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2021, 477, 20200855.	1.0	47
43	The entrainment due to a turbulent fountain at a density interface. Journal of Fluid Mechanics, 2005, 542, 25.	1.4	44
44	Seasonal variation in airborne infection risk in schools due to changes in ventilation inferred from monitored carbon dioxide. Indoor Air, 2021, 31, 1154-1163.	2.0	44
45	Laboratory experiments on fronts. Geophysical and Astrophysical Fluid Dynamics, 1982, 19, 189-206.	0.4	42
46	The fluid dynamics of an underfloor air distribution system. Journal of Fluid Mechanics, 2006, 554, 323.	1.4	42
47	Questioning the Mpemba effect: hot water does not cool more quickly than cold. Scientific Reports, 2016, 6, 37665.	1.6	42
48	Displacement ventilation: a viable ventilation strategy for makeshift hospitals and public buildings to contain COVID-19 and other airborne diseases. Royal Society Open Science, 2020, 7, 200680.	1.1	42
49	Impact of aperture separation on wind-driven single-sided natural ventilation. Building and Environment, 2016, 108, 122-134.	3.0	41
50	The final stage of decay of turbulence in stably stratified fluid. Journal of Fluid Mechanics, 1983, 134, 195.	1.4	39
51	Buoyancy-driven ventilation between two chambers. Journal of Fluid Mechanics, 2002, 463, 293-312.	1.4	39
52	The front speed of intrusive gravity currents. Journal of Fluid Mechanics, 2006, 552, 1.	1.4	37
53	The effectiveness of an air curtain in the doorway of a ventilated building. Journal of Fluid Mechanics, 2014, 756, 130-164.	1.4	37
54	Confronting Grand Challenges in environmental fluid mechanics. Physical Review Fluids, 2021, 6, .	1.0	37

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55	The structure and origin of confined HolmboeÂwaves. Journal of Fluid Mechanics, 2018, 848, 508-544.	1.4	36
56	Saline and particle-driven interfacial intrusions. Journal of Fluid Mechanics, 1999, 389, 303-334.	1.4	35
57	Contaminants in ventilated filling boxes. Journal of Fluid Mechanics, 2007, 591, 97-116.	1.4	35
58	Predictive and retrospective modelling of airborne infection risk using monitored carbon dioxide. Indoor and Built Environment, 2022, 31, 1363-1380.	1.5	35
59	Two-layer spin-up and frontogenesis. Journal of Fluid Mechanics, 1984, 143, 69-94.	1.4	34
60	Intrusive gravity currents. Journal of Fluid Mechanics, 2006, 568, 193.	1.4	34
61	The effects of an opposing buoyancy force on the performance of an air curtain in the doorway of a building. Energy and Buildings, 2015, 96, 20-29.	3.1	33
62	The Modular Aerial Sensing System. Journal of Atmospheric and Oceanic Technology, 2016, 33, 1169-1184.	0.5	33
63	Gravity currents over porous substrates. Journal of Fluid Mechanics, 1998, 366, 239-258.	1.4	32
64	Natural ventilation in cities: the implications of fluid mechanics. Building Research and Information, 2018, 46, 809-828.	2.0	32
65	Natural ventilation in London: Towards energy-efficient and healthy buildings. Building and Environment, 2021, 195, 107722.	3.0	31
66	Sourceâ€“sink turbulence in a rotating stratified fluid. Journal of Fluid Mechanics, 1995, 298, 81-112.	1.4	30
67	Entrainment in two coalescing axisymmetric turbulent plumes. Journal of Fluid Mechanics, 2014, 752, .	1.4	30
68	Diapycnal mixing in layered stratified plane Couette flow quantified in a tracer-based coordinate. Journal of Fluid Mechanics, 2017, 823, 198-229.	1.4	30
69	The front speed of intrusions into a continuously stratified medium. Journal of Fluid Mechanics, 2008, 594, 369-377.	1.4	29
70	Rotating gravity currents: small-scale and large-scale laboratory experiments and a geostrophic model. Journal of Fluid Mechanics, 2007, 578, 35-65.	1.4	28
71	Stratified shear flow: experiments in an inclined duct. Journal of Fluid Mechanics, 2014, 753, 242-253.	1.4	27
72	Structure evolution at early stage of boundary-layer transition: simulation and experiment. Journal of Fluid Mechanics, 2020, 890, .	1.4	27

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73	The effect of background rotation on fluid motions: a report on Euromech 245. Journal of Fluid Mechanics, 1990, 211, 417-435.	1.4	25
74	Stability of a buoyancy-driven coastal current at the shelf break. Journal of Fluid Mechanics, 2002, 452, 97-121.	1.4	23
75	Lock-release inertial gravity currents over a thick porous layer. Journal of Fluid Mechanics, 2004, 503, 299-319.	1.4	23
76	Axisymmetric gravity currents on a cone. Journal of Fluid Mechanics, 2006, 565, 227.	1.4	22
77	Intrusive gravity currents between two stably stratified fluids. Journal of Fluid Mechanics, 2010, 647, 53-69.	1.4	22
78	Microbursts: a hazard for aircraft. Nature, 1985, 317, 601-602.	13.7	21
79	Mixing processes in a highly stratified river. Coastal and Estuarine Studies, 1998, , 389-400.	0.4	20
80	Source-sink turbulence in a stratified fluid. Journal of Fluid Mechanics, 1994, 261, 273-303.	1.4	19
81	Testing the Assumptions Underlying Ocean Mixing Methodologies Using Direct Numerical Simulations. Journal of Physical Oceanography, 2019, 49, 2761-2779.	0.7	19
82	Assessment and mitigation of personal exposure to particulate air pollution in cities: An exploratory study. Sustainable Cities and Society, 2021, 72, 103052.	5.1	19
83	Predicting the pore-filling ratio in lumen-impregnated wood. Wood Science and Technology, 2017, 51, 1277-1290.	1.4	18
84	The effect of an indoor-outdoor temperature difference on transient cross-ventilation. Building and Environment, 2020, 168, 106447.	3.0	18
85	A comparison of entrainment in turbulent lineÂplumes adjacent to and distant from a verticalÂwall. Journal of Fluid Mechanics, 2020, 882, .	1.4	18
86	Conditional sampling of a high PÃ©clet number turbulent plume and the implications for entrainment. Journal of Fluid Mechanics, 2017, 823, 26-56.	1.4	17
87	Experimental study on low-speed streaks in a turbulent boundary layer at low Reynolds number. Journal of Fluid Mechanics, 2020, 903, .	1.4	17
88	Interacting Turbulent Plumes in a Naturally Ventilated Enclosure. International Journal of Ventilation, 2006, 4, 301-310.	0.2	16
89	Gravity current propagation up a valley. Journal of Fluid Mechanics, 2015, 762, 417-434.	1.4	16
90	Characteristics of colliding sea breeze gravity current fronts: a laboratory study. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 1434-1441.	1.0	16

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91	A full-scale field study for evaluation of simple analytical models of cross ventilation and single-sided ventilation. Building and Environment, 2021, 187, 107386.	3.0	16
92	Numerical study of COVID-19 spatialâ€“temporal spreading in London. Physics of Fluids, 2021, 33, 046605.	1.6	16
93	The circular capillary jump. Journal of Fluid Mechanics, 2020, 896, .	1.4	15
94	The drag on a vertically moving grid of bars in a linearly stratified fluid. Experiments in Fluids, 2003, 34, 678-686.	1.1	14
95	Regime transitions and energetics of sustained stratified shear flows. Journal of Fluid Mechanics, 2019, 875, 657-698.	1.4	14
96	Buoyancy-driven exchange flows in inclined ducts. Journal of Fluid Mechanics, 2020, 893, .	1.4	14
97	The flow of a stratified fluid in a rotating annulus. Journal of Fluid Mechanics, 1977, 79, 435-447.	1.4	13
98	Gravity currents in rotating channels. Part 1. Steady-state theory. Journal of Fluid Mechanics, 2002, 457, 295-324.	1.4	13
99	Experimental exploration of fluid-driven cracks in brittle hydrogels. Journal of Fluid Mechanics, 2018, 844, 435-458.	1.4	13
100	Detrainment of plumes from vertically distributed sources. Environmental Fluid Mechanics, 2018, 18, 3-25.	0.7	13
101	Particle transport in low-energy ventilation systems. Part 1: theory of steady states. Indoor Air, 2009, 19, 122-129.	2.0	12
102	The efficiency of pulsed-jet propulsion. Journal of Fluid Mechanics, 2011, 668, 1-4.	1.4	12
103	Mixing efficiency in run-down gravity currents. Journal of Fluid Mechanics, 2016, 809, 691-704.	1.4	12
104	Anticyclonic precession of a plume in a rotating environment. Geophysical Research Letters, 2017, 44, 9400-9407.	1.5	12
105	Air Flow Experiments on a Train Carriageâ€”Towards Understanding the Risk of Airborne Transmission. Atmosphere, 2021, 12, 1267.	1.0	12
106	Intermittent baroclinic instability and fluctuations in geophysical circulations. Nature, 1985, 316, 801-803.	13.7	11
107	Local implications for self-similar turbulent plume models. Journal of Fluid Mechanics, 2007, 575, 257-265.	1.4	11
108	Validity of thermally-driven small-scale ventilated filling box models. Experiments in Fluids, 2013, 54, 1.	1.1	11

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109	A laboratory simulation of mixing across tidal fronts. Journal of Fluid Mechanics, 1996, 309, 321-344.	1.4	10
110	Experimental investigations of quasi-two-dimensional vortices in a stratified fluid with sourceâ€“sink forcing. Journal of Fluid Mechanics, 1999, 383, 249-283.	1.4	10
111	A metamorphosis of three-dimensional wave structure in transitional and turbulent boundary layers. Journal of Fluid Mechanics, 2021, 914, .	1.4	10
112	Free-surface effects on the spin-up of fluid in a rotating cylinder. Journal of Fluid Mechanics, 1991, 232, 439.	1.4	9
113	The Fluxes and Behaviour of Plumes Inferred from Measurements of Coherent Structures within Images of the Bulk Flow. Atmosphere - Ocean, 2016, 54, 403-417.	0.6	9
114	Cell geometry across the ring structure of Sitka spruce. Journal of the Royal Society Interface, 2018, 15, 20180144.	1.5	9
115	Data Assimilation in the Latent Space of a Convolutional Autoencoder. Lecture Notes in Computer Science, 2021, , 373-386.	1.0	9
116	Transpiration through hydrogels. Journal of Fluid Mechanics, 2021, 925, .	1.4	9
117	Small-scale mixing in stably stratified fluids: a report on Euromech 51. Journal of Fluid Mechanics, 1975, 67, 1-16.	1.4	8
118	Colliding turbulent plumes. Journal of Fluid Mechanics, 2006, 550, 85.	1.4	8
119	Intrusion-generated waves in a linearly stratified fluid. Journal of Fluid Mechanics, 2014, 752, 282-295.	1.4	8
120	Experimental properties of continuously forced, shear-driven, stratified turbulence. Part 2. Energetics, anisotropy, parameterisation. Journal of Fluid Mechanics, 2022, 937, .	1.4	8
121	Experimental properties of continuously forced, shear-driven, stratified turbulence. Part 1. Mean flows, self-organisation, turbulent fractions. Journal of Fluid Mechanics, 2022, 937, .	1.4	8
122	Hydrogel as a Medium for Fluid-Driven Fracture Study. Experimental Mechanics, 2017, 57, 1483-1493.	1.1	7
123	The effect of double diffusion on the dynamics of horizontal turbulent thermohaline jets. Journal of Fluid Mechanics, 2020, 905, .	1.4	7
124	The transport of liquids in softwood: timber as a model porous medium. Scientific Reports, 2019, 9, 20282.	1.6	6
125	The effect of double diffusion on entrainment in turbulent plumes. Journal of Fluid Mechanics, 2020, 884, .	1.4	6
126	Contaminant transport by human passage through an air curtain separating two sections of a corridor: Part I â€“ Uniform ambient temperature. Energy and Buildings, 2021, 236, 110818.	3.1	6

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127	Vertically distributed wall sources of buoyancy. Part 1. Unconfined. Journal of Fluid Mechanics, 2021, 907, .	1.4	6
128	Buoyancy-driven flow between two rooms coupled by two openings at different levels. Journal of Fluid Mechanics, 2008, 594, 425-443.	1.4	5
129	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
130	Plumes in rotating fluid and their transformation into tornados. Journal of Fluid Mechanics, 2021, 924, .	1.4	5
131	The circular hydraulic jump; the influence of downstream flow on the jump radius. Physics of Fluids, 2022, 34, .	1.6	5
132	Benthic fronts and global excess radon distribution. Geophysical and Astrophysical Fluid Dynamics, 1983, 25, 309-315.	0.4	4
133	Flow of buoyant granular materials along a freeÂsurface. Journal of Fluid Mechanics, 2018, 848, 312-339.	1.4	3
134	Modeling disease transmission in a train carriage using a simple <scp>1D</scp> â€model. Indoor Air, 2022, 32, .	2.0	3
135	Spin-up of a two-layer fluid in a rotating cylinder. Geophysical and Astrophysical Fluid Dynamics, 1992, 66, 47-66.	0.4	2
136	Vertically distributed wall sources of buoyancy. Part 2. Unventilated and ventilated confined spaces. Journal of Fluid Mechanics, 2021, 907, .	1.4	2
137	Effects of background rotation on the dynamics of multiphase plumes. Journal of Fluid Mechanics, 2021, 915, .	1.4	2
138	Bubble curtains used as barriers across horizontal density stratifications. Journal of Fluid Mechanics, 2022, 941, .	1.4	2
139	Topographic instability and multiple equilibria on anf-plane. Geophysical and Astrophysical Fluid Dynamics, 1983, 27, 163-182.	0.4	1
140	Report on Turbulence and Mixing in Geophysical Flows II. Flow, Turbulence and Combustion, 1997, 59, 89-110.	0.2	1
141	Sensitivity of horizontal flows to forcing geometry. Journal of Fluid Mechanics, 2001, 432, 419-441.	1.4	1
142	Eigenmode resonance in a two-layer stratification. Journal of Fluid Mechanics, 2002, 460, 223-240.	1.4	1
143	Laboratory modelling of the effects of temporal changes of estuarine-fresh-water discharge rates on the propagation speed of oceanographic coastal currents. Journal of Fluid Mechanics, 2010, 664, 337-347.	1.4	1
144	Fluid mechanics of sash windows. Flow, 2022, 2, .	1.0	1

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145	Physical oceanography of the European shelf-seas: A report on the geophysical fluid mechanics symposium of the E.G.S. (1980). Geophysical and Astrophysical Fluid Dynamics, 1981, 17, 319-329.	0.4	0
146	Identifying Efficient Transport Pathways in Early-Wood Timber: Insights from 3D X-ray CT Imaging of Softwood in the Presence of Flow. Transport in Porous Media, 2021, 136, 813-830.	1.2	0
147	Geophysical and Environmental Fluid Dynamics. Lecture Notes Series, Institute for Mathematical Sciences, 2011, , 29-62.	0.2	0